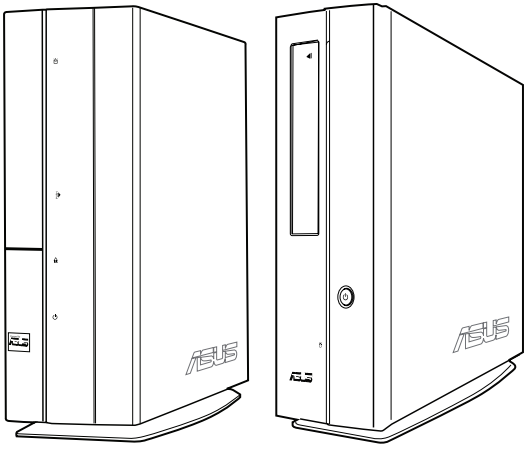
P2-P5N9300/P4-P5N9300

ASUS PC (Desktop Barebone)

User Manual



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Notices

ASUS REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://green.asus.com/english/REACH.htm.

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference; and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Macrovision Corporation Product Notice

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Safety information

Electrical safety

- To prevent electric shock hazard, disconnect the power cable from the electric outlet before relocating the system.
- When adding or removing any devices to or from the system, contact a qualified service technician or your retailer. Ensure that all the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all the power cables from the existing system before you add or remove a device to or from the system.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing devices into the system, carefully read all the documentation that comes with the package.
- Before using the product, ensure that all the cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets, and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet. Place the product on a flat and stable surface.
- Do not block the air vents on the chassis. Always provide proper ventilation for this product.
- We recommend that you use this product in environments with an ambient temperature below 40˚C.
- If you encounter technical problems with this product, contact a qualified service technician or your retailer.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

VORSICHT: Explosionsgetahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnljchen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

LASER PRODUCT WARNING

CLASS 1 LASER PRODUCT

About this guide

Audience

This guide provides general information about the ASUS P2-P5N9300/ P4-P5N9300 barebone system. This guide is intended for experienced users and integrators with hardware knowledge of personal computers.

How this guide is organized

This guide contains the following parts:

1. **Chapter 1: System introduction**

   This chapter gives a general description of ASUS P2-P5N9300/P4-P5N9300. The chapter lists the system features, including introduction on the front and rear panel, and internal components.

2. **Chapter 2: Starting up**

   This chapter helps you power up the system and install drivers and utilities from the support CD.

3. **Chapter 3: Motherboard information**

   This chapter gives information about the motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

4. **Chapter 4: BIOS information**

   This chapter tells how to change system settings through the BIOS Setup menus and describes the BIOS parameters.

Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to help you complete a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

   The ASUS websites provide updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. **Optional Documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

System package contents

Check your P2-P5N9300/P4-P5N9300 system package for the following items.

Standard items
1. ASUS P2-P5N9300/P4-P5N9300 barebone system with
• ASUS motherboard
• 3-in-1 storage card reader
• PCIE raiser card
• 200W power supply unit
2. Cables
• Power cable
• Serial ATA power cable and signal cable
3. CD
• Support CD
4. Quick Installation Guide

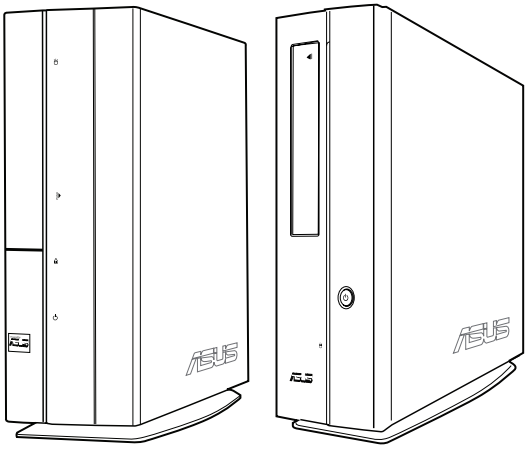
If any of the items is damaged or missing, contact your retailer immediately.

Optional items
1. ASUS VGA card
2. Infrared card (for P4-P5N9300 only)
3. Remote control (for P4-P5N9300 only)

Optional items are not included in the system package. They are purchased separately.

Chapter 1

This chapter gives a general description of ASUS P2-P5N9300/ P4-P5N9300. The chapter lists the system features including introduction on the front and rear panels, and internal components.



System introduction

1.1 Welcome!

Thank you for purchasing the ASUS P2-P5N9300/P4-P5N9300!

The ASUS P2-P5N9300/P4-P5N9300 is an all-in-one barebone system with rich home entertainment features.

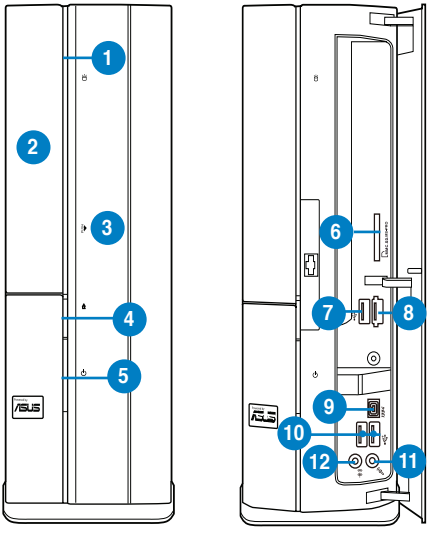
The system comes in a stylish casing and powered by an ASUS motherboard that supports the Intel® Prescott, Smithfield, Cedarmill, Kentsfield, Conroe, Wolfdale, and Yorkfield processors.

The system supports up to 4GB system memory using unbuffered non-ECC DDR2 800/667MHz DIMMs, high-resolution graphics via integrated graphics controller, Serial ATA, USB 2.0, and eight-channel high-definition audio CODEC.

1.2 Front panel

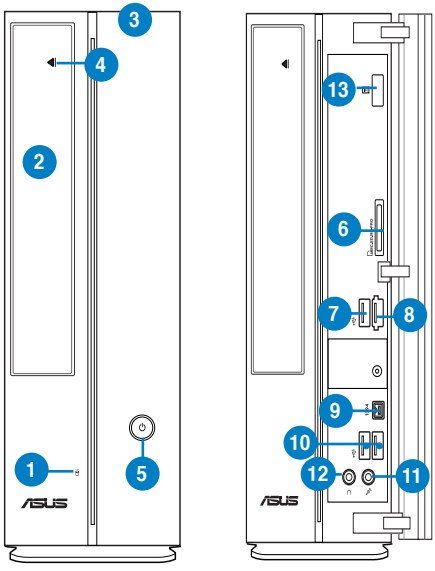
The illustrations below show the front panels of the P2-P5N9300 and P4-P5N9300.

Front panel of P2-P5N9300



Front panel (close) Front panel (open)

Front panel of P4-P5N9300



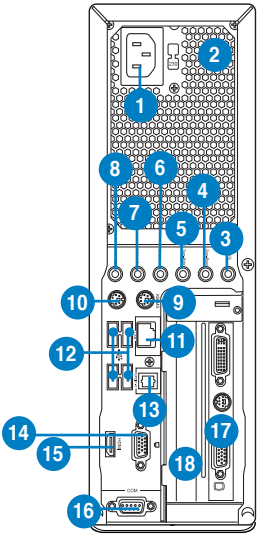
Front panel (close) Front panel (open)

1. **Hard disk drive (HDD) LED.** This LED lights up when data is read from or written to the hard disk drive.
2. **Optical disk drive (ODD) bay cover.**
3. **Front panel cover.**
4. **Optical disk drive eject button.** Press this button to eject an optical disk.
5. **Power button.** Press this button to turn the system on.
6. **3-in-1 card reader.** This 3-in-1 card reader supports the MultiMediaCard, Secure Digital™ card, and Memory Stick™/Memory Stick PRO™ card.
7. **USB 2.0 port 9.** This Universal Serial Bus 2.0 (USB 2.0) port connects to USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.
8. **USB / eSATA port.** This port connects to a USB 2.0 device or an external Serial ATA hard disk drive.
9. **4-pin IEEE 1394 port.** This port connects to an IEEE 1394 device such as a digital camrecorder.
10. **USB 2.0 ports 10 and 11.** These Universal Serial Bus 2.0 (USB 2.0) ports connect to USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.
11. **Microphone port (pink).** This port connects to a microphone.

12. **Headphone port (lime).** This port connects to a headphone or speaker.
13. **IR card (optional).** This IR card supports a remote control.

1.3 Rear panel

The illustration below shows the rear panel of the P2-P5N9300 and P4-P5N9300.



Rear panel

1. **Power connector.**
2. **Voltage selector.** This switch allows you to adjust the system input voltage according to the voltage supply in your area. If the voltage supply in your area is 100-127V, set this switch to 115V. If the voltage supply in your area is 200-240V, set this switch to 230V.

Setting the switch to 115V in a 230V environment or 230V in a 115 environment will seriously damage the system!

3. **Center/Subwoofer port (orange).** This port connects to the center/ subwoofer speakers.
4. **Rear Speaker Out port (black).** This port connects to the rear speakers in a 4-channel, 6-channel, or 8-channel audio configuration.

5. **Side Speaker Out port (grey).** This port connects to the side speakers in an 8-channel audio configuration.
6. **Line In port (light blue).** This port connects to the tape, CD, DVD player, or other audio sources.
7. **Line Out port (lime).** This port connects to a headphone or speaker. In 4-channel, 6-channel, and 8-channel configurations, the function of this port becomes Front Speaker Out.
8. **Microphone port (pink).** This port connects to a microphone.

Refer to the audio configuration table below for the function of the audio ports in 2, 4, 6, or 8-channel configuration.

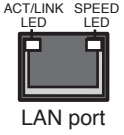
Audio 2, 4, 6, or 8-channel configuration

Port	Headset 2-channel	4-channel	6-channel	8-channel
Light Blue	Line In	Line In	Line In	Line In
Lime	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Mic In	Mic In
Orange	–	–	Center/Subwoofer	Center/Subwoofer
Black	–	Rear Speaker Out	Rear Speaker Ou	Rear Speaker Out
Gray	–	–	–	Side Speaker Out

9. **PS/2 mouse port (green).** This port connects to a PS/2 mouse.
10. **PS/2 keyboard port (purple).** This port connects to a PS/2 keyboard**.**
11. **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

LAN port LED indications

ACT/LINK LED		SPEED LED	
Status	Description	Status	Description
OFF	No link	OFF	10Mbps connection
YELLOW	Linked	ORANGE	100Mbps connection
BLINKING	Data activity	GREEN	1Gbps connection



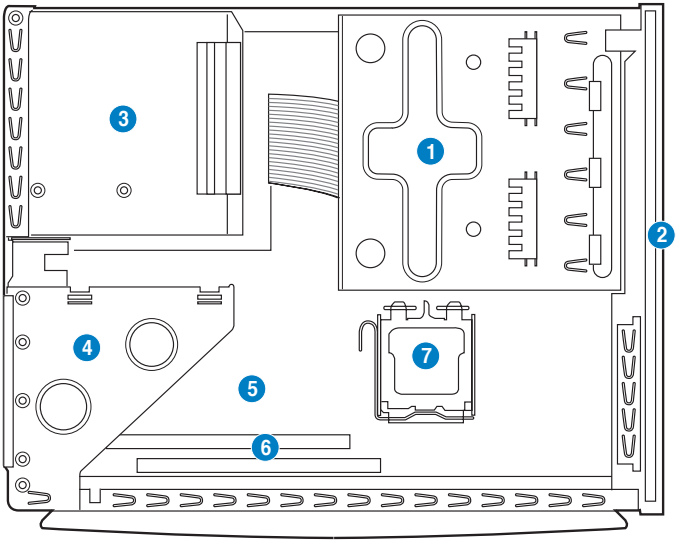
LAN port

12. **USB 2.0 ports 1, 2, 3, and 4.** These 4-pin Universal Serial Bus (USB) ports connect to USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.

13. **Optical S/PDIF_OUT port.** This port connects to an external audio output device via an optical S/PDIF cable.
14. **VGA port.** This port connects to a VGA monitor or other VGA-compatible devices.
15. **HDMI port.** This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-Ray discs, and other protected content.
16. **Serial port.** This port is for pointing devices or other serial devices.
17. **ASUS VGA card (optional).**
18. **Expansion slot.**

1.4 Internal components

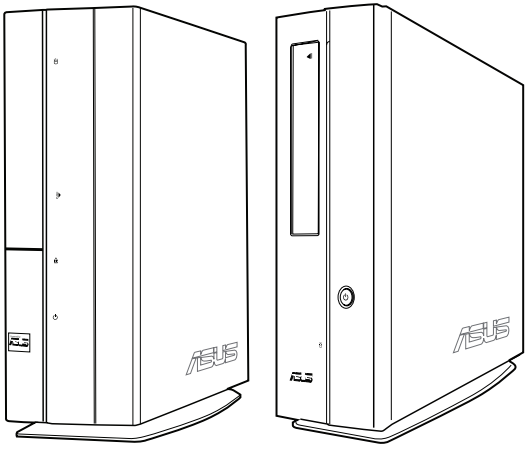
The illustration below is the internal view of the ASUS P2-P5N9300/P4-P5N9300 when you remove the chassis cover. The installed components are labeled for your reference.



1. 5.25 inch optical disk drive and 3.5 inch hard disk drive cage
2. Front panel assembly
3. Power supply unit
4. PCIE raiser bracket (connected to the motherboard PCIE slot)
5. ASUS motherboard
6. DIMM slots
7. LGA775 socket

Chapter 2

This chapter helps you power up the system and install drivers and utilities from the Support CD.



Starting up

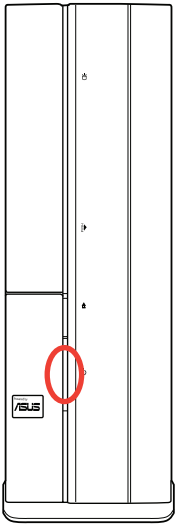
2.1 Installing an operating system

The ASUS P2-P5N9300/P4-P5N9300 supports Windows® XP / Vista Operating Systems (OS). Always install the latest OS version and corresponding updates to maximize the features of your hardware.

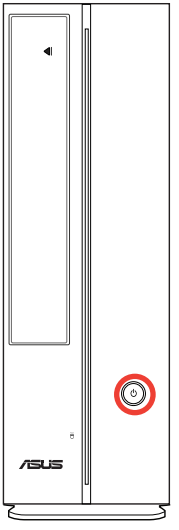
- To ensure that the OS work properly, install the drivers included in the Support CD.
- Motherboard settings and hardware options vary. Use the setup procedures presented in this chapter for reference only. Refer to your OS documentation for detailed information.

2.2 Powering up your system

Press the power button (⏻) to power up the system.



P2-P5N9300



P4-P5N9300

2.3 Support CD information

The support CD that comes with the system package contains the drivers, software applications, and utilities that you can install to get all the system features.

The contents of the Support CD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

2.3.1 Running the Support CD

Place the Support CD into the optical drive. The CD automatically displays the **Drivers** menu if Autorun is enabled on your computer.

ASUS P-P5N9300 motherboard support CD for Windows Vista
Drivers
Utilities
Make Disk
Manual
Contact
Drivers
Please select items on the right side.
ASUS InstAll - Installation Wizard for Anti-Virus and Driv >>
Norton Internet Security 2008
NVIDIA Chipset Driver Program
Realtek Audio Driver
NVIDIA HDMI Audio Driver
Realtek RTL8111B/C LAN Driver
VIA Card Reader Driver
Click an icon to display Support CD/motherboard information
Click an item to install

If Autorun is NOT enabled on your computer, browse the contents of the Support CD to locate the **ASSETUP.EXE** file from the BIN folder. Double-click the **ASSETUP.EXE** file to run the CD.

2.3.2 Drivers menu

The **Drivers** menu shows the available device drivers if the system detects installed devices. Install the necessary drivers to activate the devices.

ASUS InstALL - Installation Wizard for Anti-Virus and Drivers Utility

Installs all of the drivers.

Norton Internet Security 2008

Installs Norton Internet Security 2008.

NVIDIA Chipset Driver Program

Installs the NVIDIA chipset driver program.

Realtek Audio Driver

Installs the Realtek® audio driver.

NVIDIA HDMI Audio Driver

Installs the NVIDIA HDMI audio driver.

Realtek RTL8111B/C LAN Driver

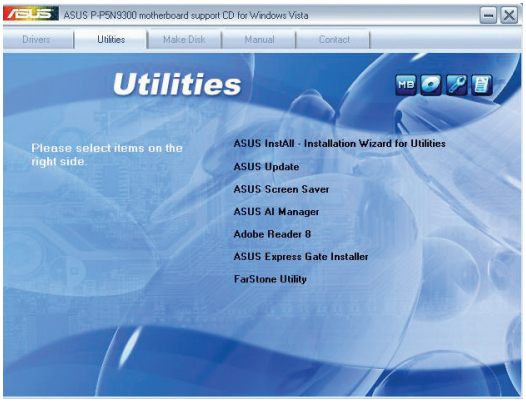
Installs the Realtek® RTL8111B/C LAN driver.

VIA Card Reader Driver

Installs the VIA® card reader driver.

2.3.3 Utilities menu

The **Utilities** menu shows the applications that the motherboard supports.



ASUS InstAll - Installation Wizard for Utilities

Installs all of the utilities.

ASUS Update

The ASUS Update utility allows you to update the motherboard BIOS in a Windows® environment. This utility requires an Internet connection either through a network or an Internet Service Provider (ISP).

ASUS Screen Saver

Installs the ASUS screensaver.

ASUS AI Manager

Installs the ASUS AI Manager where you can launch AI disk, AI Security, and AI Probe easily.

Acrobat Reader 8

Installs the Adobe® Acrobat® Reader that allows you to open, view, and print documents in Portable Document Format (PDF).

ASUS Express Gate Installer

Installs the ASUS Express Gate.

FarStone Utility

Installs the FarStone utility.

2.3.4 Make Disk menu

The **Make Disk** menu allows you to make a RAID driver disk.

ASUS P-P5N9300 motherboard support CD for Windows Vista
Drivers
Utilities
Make Disk
Manual
Contact
Make disk
Please select items on the right side.
NVIDIA 32bit XP SATA RAID Driver
NVIDIA 64bit XP SATA RAID Driver
NVIDIA 32bit Vista SATA RAID Driver
NVIDIA 64bit Vista SATA RAID Driver
NVIDIA 32bit XP AHCI Driver
NVIDIA 64bit XP AHCI Driver
NVIDIA 32bit Vista AHCI Driver
NVIDIA 64bit Vista AHCI Driver

NVIDIA 32bit/64bit XP SATA RAID Driver

Allows you to create an NVIDIA® Serial ATA (SATA) RAID driver disk for 32bit/64bit Windows® XP operating systems.

NVIDIA 32bit/64bit Vista SATA RAID Driver

Allows you to create an NVIDIA® Serial ATA (SATA) RAID driver disk for 32bit/64bit Windows® Vista operating systems.

NVIDIA 32bit/64bit XP AHCI Driver

Allows you to create an NVIDIA® AHCI driver disk for 32bit/64bit Windows® XP operating systems.

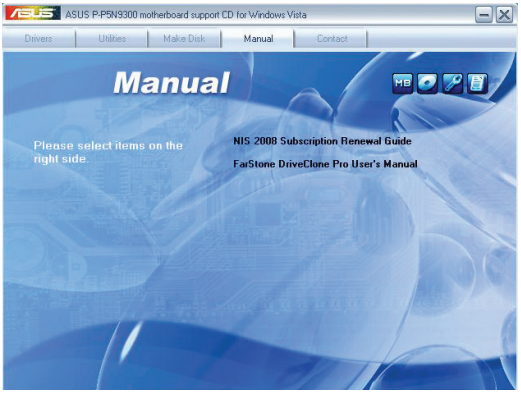
NVIDIA 32bit/64bit Vista AHCI Driver

Allows you to create an NVIDIA® AHCI driver disk for 32bit/64bit Windows® Vista operating systems.

2.3.5 Manual menu

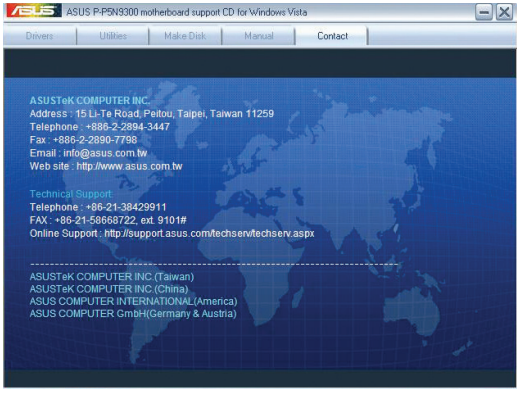
The **Manual** menu contains a list of supplementary user manuals.

The manuals are in Portable Document Format (PDF) format. Install the Adobe® Acrobat® Reader from the **Utilities** menu before opening a manual.



2.3.6 ASUS Contact information

Click the **Contact** tab to display the ASUS contact information.

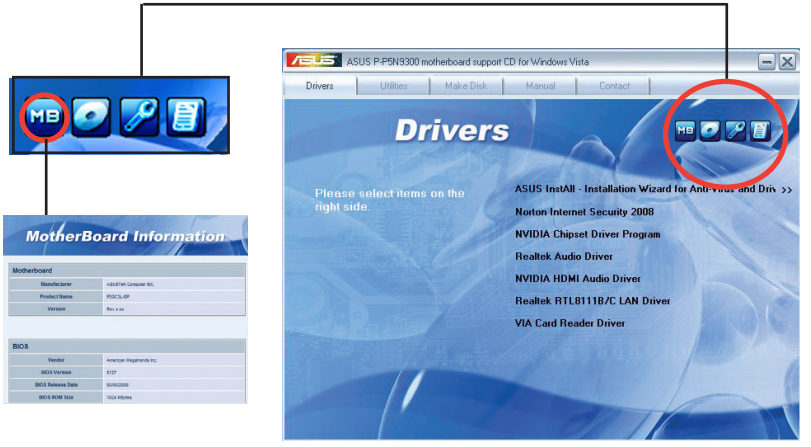


2.3.7 Other information

The icons on the top right corner of the screen give additional information on the motherboard and the contents of the Support CD. Click an icon to display the specified information.

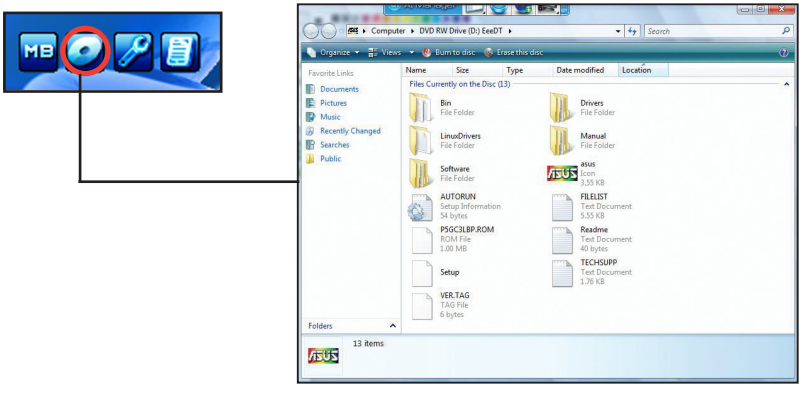
Motherboard Info

Displays the general specifications of the motherboard.



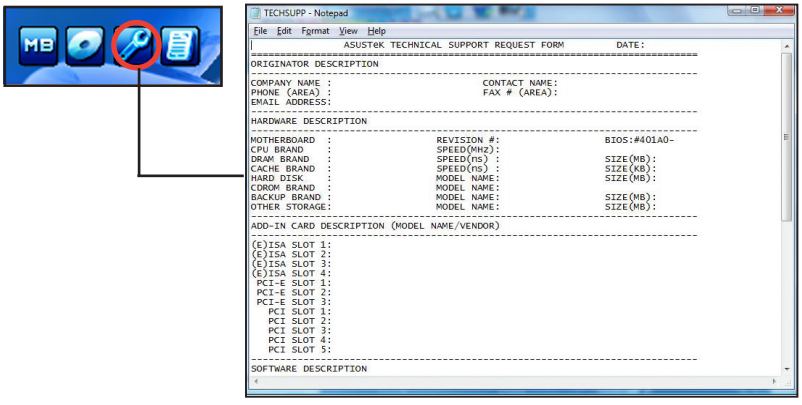
Browse this CD

Displays the Support CD contents in graphical format.



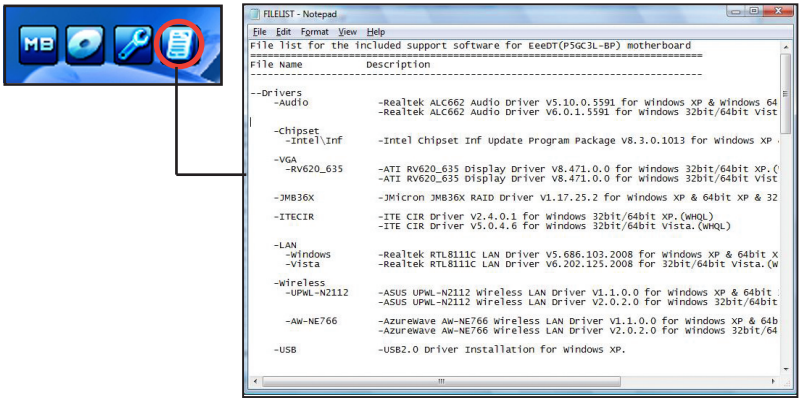
Technical Support Form

Displays the ASUS Technical Support Request Form that you have to fill out when requesting technical support.



Filelist

Displays the contents of the Support CD and a brief description of each item in text format.


FILELIST - Notepad
File Edit Format View Help
File list for the included support software for EeeDT(P5GC3L-BP) motherboard
File Name Description
--Drivers
-Audio
-Realtek ALC662 Audio Driver V5.10.0.5591 for Windows XP & Windows 64
-Realtek ALC662 Audio Driver V6.0.1.5591 for Windows 32bit/64bit Vist
-Chipset
-Intel\Inf
-Intel Chipset Inf Update Program Package V8.3.0.1013 for Windows XP
-VGA
-RV620_635
-ATI RV620_635 Display Driver V8.471.0.0 for Windows 32bit/64bit XP.(
-ATI RV620_635 Display Driver V8.471.0.0 for Windows 32bit/64bit Vist
-JMB36X
-JMicron JMB36X RAID Driver V1.17.25.2 for Windows XP & 64bit XP & 32
-ITECIR
-ITE CIR Driver V2.4.0.1 for Windows 32bit/64bit XP.(WHQL)
-ITE CIR Driver V5.0.4.6 for Windows 32bit/64bit Vista.(WHQL)
-LAN
-Windows
-Vista
-Realtek RTL8111C LAN Driver V5.686.103.2008 for Windows XP & 64bit X
-Realtek RTL8111C LAN Driver V6.202.125.2008 for 32bit/64bit Vista.(W
-Wireless
-UPWL-N2112
-ASUS UPWL-N2112 Wireless LAN Driver V1.1.0.0 for Windows XP & 64bit
-ASUS UPWL-N2112 Wireless LAN Driver V2.0.2.0 for Windows 32bit/64bit
-AW-NE766
-AzureWave AW-NE766 Wireless LAN Driver V1.1.0.0 for Windows XP & 64b
-AzureWave AW-NE766 Wireless LAN Driver V2.0.2.0 for Windows 32bit/64
-USB
-USB2.0 Driver Installation for Windows XP.

2.4 ASUS AI Manager

ASUS AI Manager allows you to launch AI Disk, AI Security, and AI Probe easily.

2.4.1 Installing AI Manager

To install AI Manager on your computer:

1. Place the Support CD into the optical drive. The CD automatically displays the **Drivers** menu if Autorun is enabled on your computer.

If Autorun is NOT enabled on your computer, browse the contents of the Support CD to locate the ASSETUP.EXE file from the BIN folder. Double-click the ASSETUP.EXE to run the CD.

2. Click the **Utilities** tab, then click **ASUS AI Manager**.
3. Follow the onscreen instructions to complete the installation.

2.4.2 Launching AI Manager

You can launch AI Manager right after installation or anytime from the Windows® desktop.

To launch AI Manager from the Windows® desktop, click **Start > All Programs > ASUS > AI Manager > AI Manager v1.xx.xx**. The AI Manager Quick Bar appears.

After launching the application, the AI Manager icon appears in the Windows® taskbar. Right-click this icon for more options.

2.4.3 AI Manager Quick Bar

Click the Main, My favorites, Support, or Information icon from the Quick Bar to show the corresponding menu.

Click to switch between a full-screen AI Manager window and the Quick bar.

Click to keep AI Manager in the taskbar.

Click to close AI Manager.

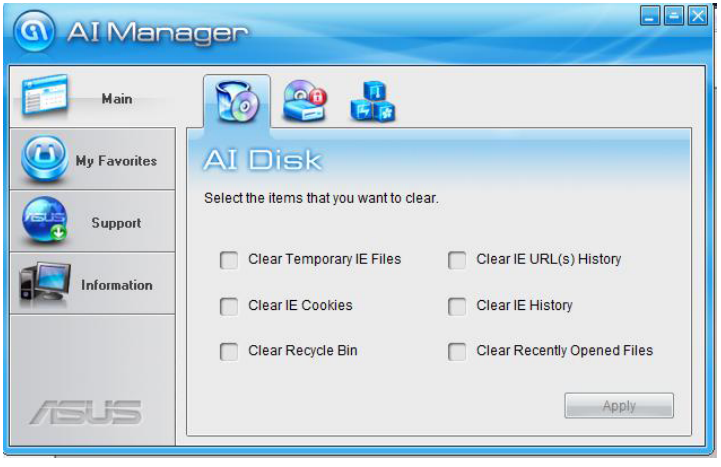
2.4.4 Main

Launch AI Disk, AI Security, or AI Probe from the Main menu. Click the small triangle to open or close the Main menu.

Click to open/close the Main menu

AI Disk

AI Disk allows you to easily clear the temporary IE files, IE URLs, IE cookies, IE history list, Recycle Bin, and recently opened files list. Select the item that you want to clear, then click **Apply**.



AI Security

AI Security allows you to set passwords to lock your removable storage devices such as a USB flash disk and CD/DVD disk, which ensures more security for your data.

To lock a device:

1. If you are using AI Security for the first time, key in a password consisting of up to 20 alphanumeric characters.
2 Confirm your password.
3. Key in your password hint (optional).
4. Click **OK**.

AI Manager
Main
My Favorites
Support
Information
AI Security
Input a password first, or you can not use the function.
* Input new password(Max length is 20 chars) :
* Re-Input new password :
" * " represent you must fill it
Input new password hint :
Ok

5. Select the device you want to lock, then click **Apply**.

6. Key in your password, then click **OK**. The device you selected cannot be accessed without the password.

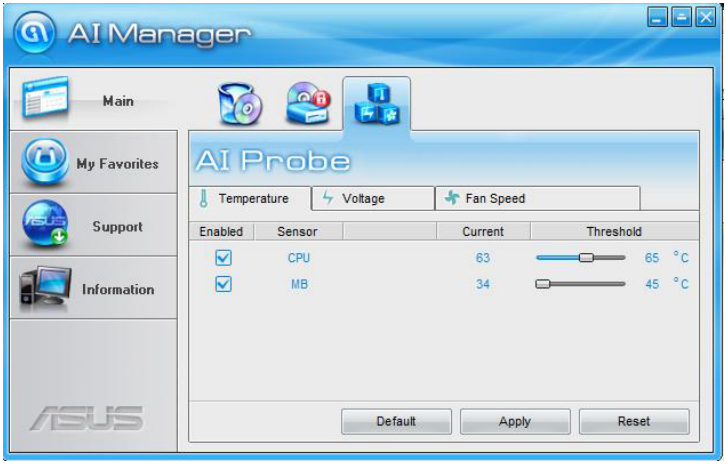
To unlock a device:

1. Deselect the device you locked, then click **Apply**.
2. Key in your password, then click **OK**.

To change your password, click **Change Password** and follow the onscreen instructions.

AI Probe

AI Probe automatically detects the motherboard and CPU temperatures, CPU fan speed, and CPU voltage. It also allows you to adjust these values manually.



2.4.5 My favorites

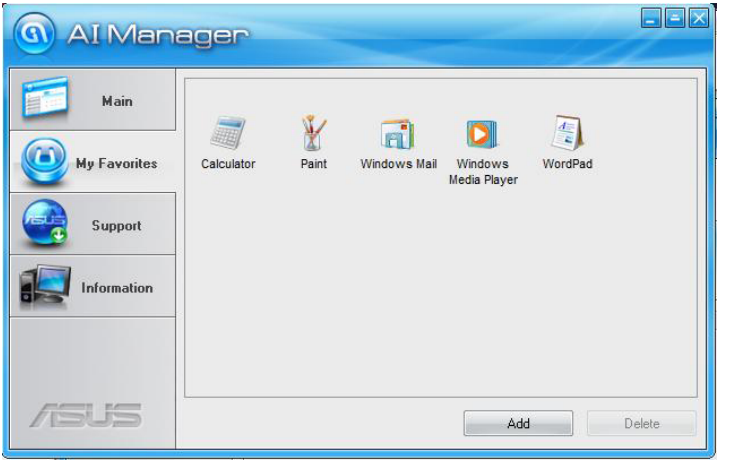
Add your favorite applications to the **My Favorites** menu.

To add an application:

1. Click **Add** and then select from the succeeding screen the application you want to add to the **My Favorites** menu.
2. Click **Open**. The application you selected is added and its icon appears.

Right-click an icon in the **My Favorites** menu to open, delete, or rename the corresponding application.

Double-click an icon to open the corresponding application.



2.4.6 Support

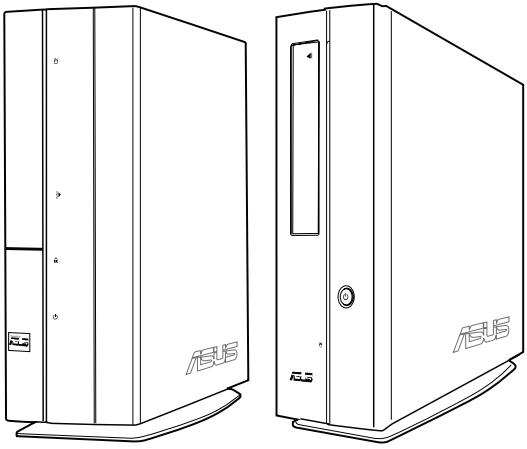
The **Support** menu displays links to the ASUS international website, online technical support website, online download support website, and contact information website.

2.4.7 Information

The **Information** menu displays the general information of your system, motherboard, CPU, BIOS, memory, and other devices installed.

Chapter 3

This chapter gives information about the motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

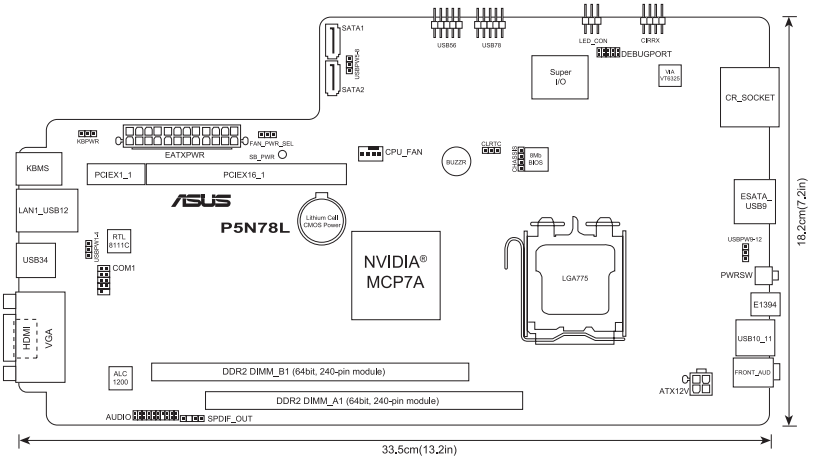


Motherboard info

3.1 Introduction

The P2-P5N9300/P4-P5N9300 barebone system comes with an ASUS motherboard. This chapter provides technical information about the motherboard for future upgrades or system reconfiguration.

3.2 Motherboard layout



3.3 Jumpers

1. Clear RTC RAM (CLRTC)

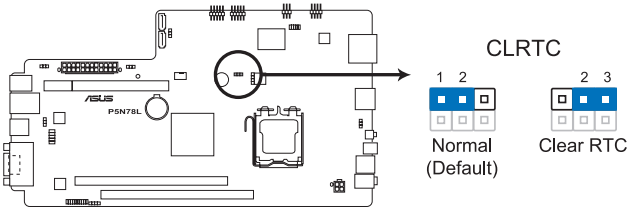
This jumper allows you to clear the Real Time Clock (RTC) RAM in the CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in the CMOS, which includes system setup information such as the system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for about 5-10 seconds, then move the cap back to pins 1-2.
3. Plug the power cord and turn ON the computer.
6. Hold down the **<Del>** key during the boot process to enter the BIOS setup program, then reenter data.

Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure.

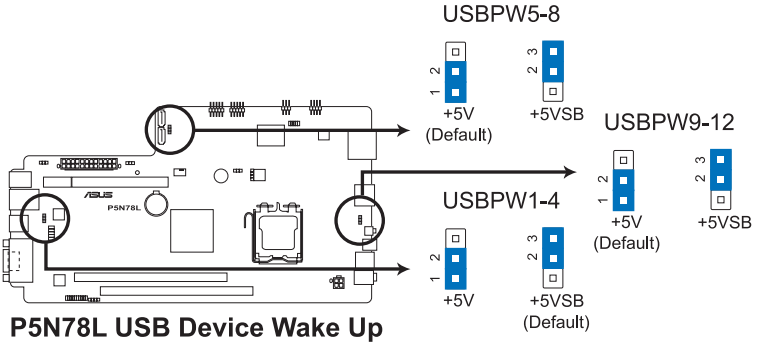
If the steps above do not help, remove the onboard battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.



P5N78L Clear RTC RAM

2. USB device wake-up (3-pin USBPW1-4, USBPW5-8, USBPW9-12)

Set these jumpers to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set these jumpers to +5VSB to wake up from S3 and S4 sleep modes (no power to CPU, DRAM in slow refresh, power supply in reduced power mode).

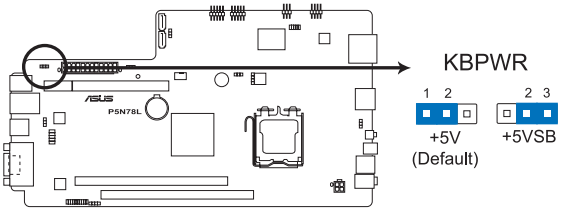


P5N78L USB Device Wake Up

- The USB device wake-up feature requires a power supply that can provide 500mA on the +5VSB lead for each USB port. Otherwise, the system would not power up.
- The total current consumed must NOT exceed the power supply capability (+5VSB) whether under normal condition or in sleep mode.

3. Keyboard power (3-pin KBPWR)

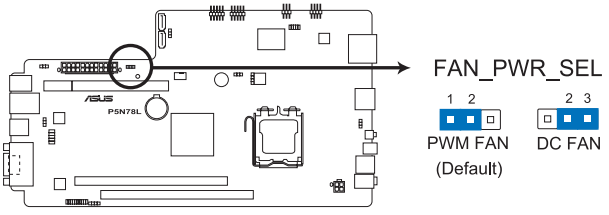
This jumper allows you to enable or disable the keyboard wake-up feature. Set this jumper to pins 2-3 (+5VSB) to wake up the computer by pressing a key on the keyboard (the default is the Space Bar). This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS.



P5N78L Keyboard Power Setting

4. FAN_PWR_SEL (3-pin FAN_PWR_SEL)

Set this jumper to pins 1-2 if you are using a 4-pin CPU fan. Set this jumper to pins 2-3 if you are using a 3-pin CPU fan.



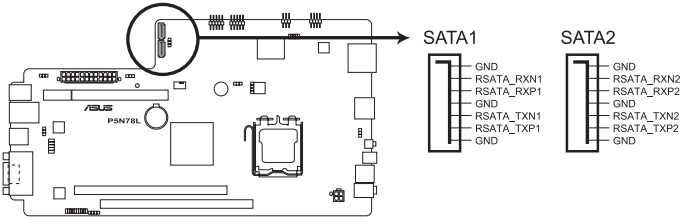
P5N78L FAN_PWR_SEL

3.4 Connectors

1. Serial ATA connectors (9-pin SATA1, SATA2)

These connectors are for the Serial ATA signal cables for Serial ATA hard disk drives.

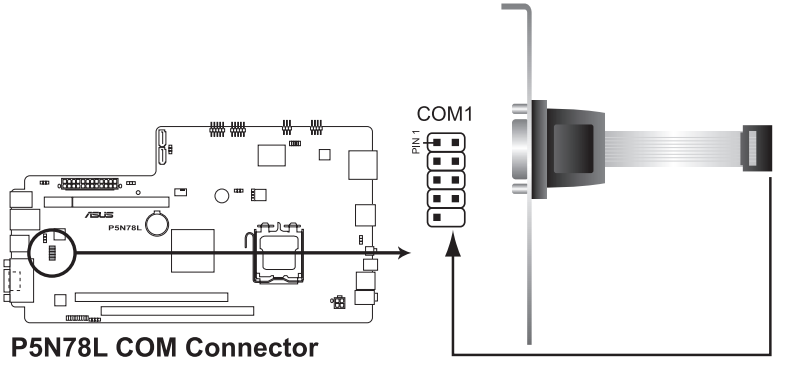
- Install Windows® XP Service Pack 1 before using Serial ATA hard disk drives.
- When using the connectors in IDE mode, connect the primary (boot) hard disk drive to the SATA1 or SATA2 connector.



P5N78L SATA Connectors

2. COM port connector (10-1pin COM1)

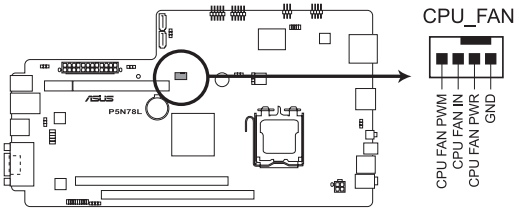
This connector is for a serial (COM) port. Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis.



P5N78L COM Connector

3. CPU Fan connector (4-pin CPU_FAN)

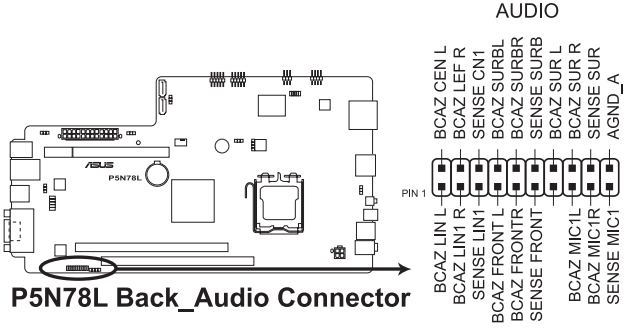
The fan connector support cooling fans of 350mA~2000mA (24W max.). Connect the fan cable to the fan connector on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.



P5N78L CPU fan connector

DO NOT forget to connect the CPU fan cable to the CPU fan connector. Insufficient air flow inside the system may damage the motherboard components. It is not a jumper! DO NOT place a jumper cap on the CPU fan connector!

4. Back audio connector (20-1 pin Back_Audio Connector)

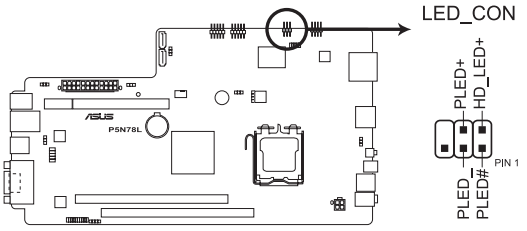


P5N78L Back_Audio Connector

We recommend that you connect a high-definition front panel audio module to this connector to get the motherboard's high-definition audio capability.

5. LED connector (6-1 pin LED_CON)

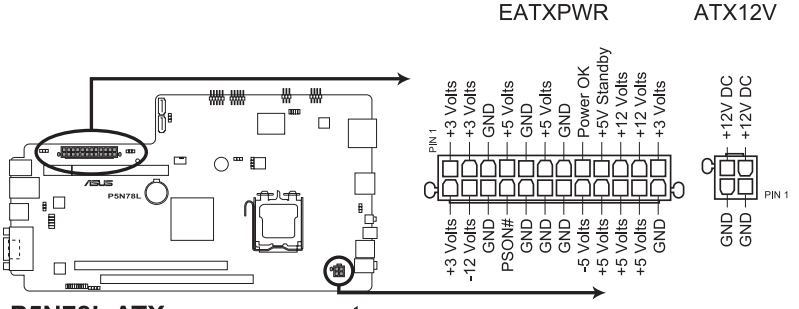
This connector supports the Power and HDD activity LEDs in the system front panel.



P5N78L LED Connector

6. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

These connectors are for ATX power supply plugs. The plugs from the power supply are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

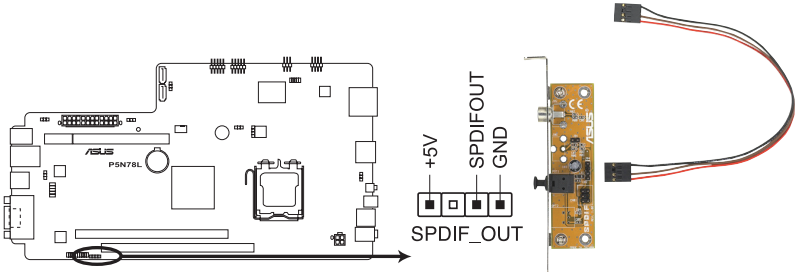


P5N78L ATX power connectors

- **DO NOT** forget to connect the 4-pin ATX +12 V power plug; otherwise, the system will not boot.
- We recommend that you use a PSU with a higher power output when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate.
- Ensure that your power supply unit (PSU) can provide at least the minimum power required by your system.

7. Digital audio connector (4-1 pin SPDIF_OUT)

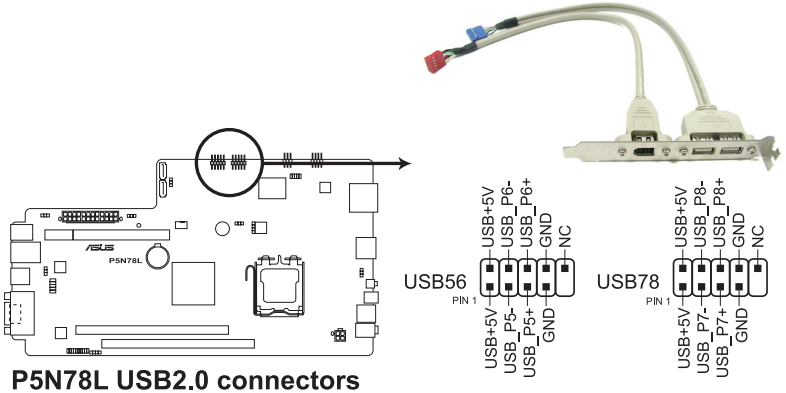
This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port(s). Connect the S/PDIF Out module cable to this connector, then install the module to a slot opening at the back of the system chassis.



P5N78L Digital audio connector

8. USB connectors (10-1 pin USB56, USB78)

These connectors are for USB 2.0 ports. Connect the USB module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specification that supports up to 480 Mbps connection speed.



P5N78L USB2.0 connectors

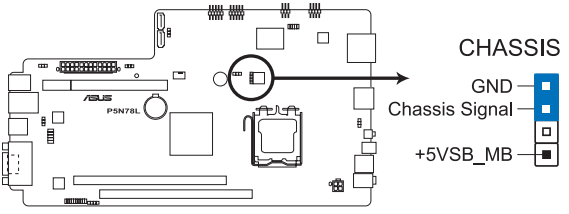
Never connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!

The USB module is purchased separately.

9. Chassis intrusion connector (4-1 pin CHASSIS)

This connector is for a chassis-mounted intrusion detection sensor or switch. Connect one end of the chassis intrusion sensor or switch cable to this connector. The chassis intrusion sensor or switch sends a high-level signal to this connector when a chassis component is removed or replaced. The signal is then generated as a chassis intrusion event.

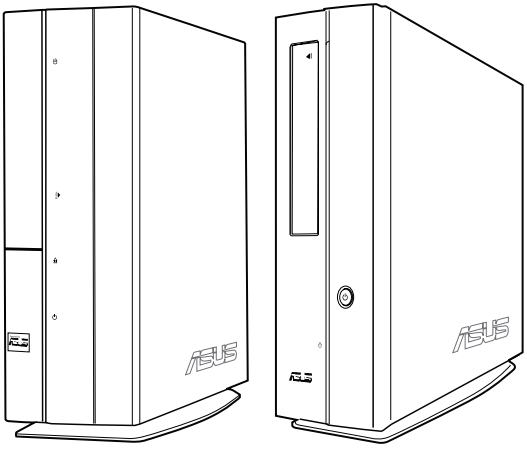
By default, the pin labeled “Chassis Signal” and “Ground” are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature.



P5N78L Chassis intrusion connector

Chapter 4

This chapter tells how to change the system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.



BIOS setup

4.1 Managing and updating you BIOS

The following utilities allow you to manage and update the motherboard Basic Input/Output System (BIOS) setup.

1. **AwardBIOS Flash Utility:** Updates the BIOS in DOS mode using a bootable floppy disk or USB flash disk.
2. **ASUS CrashFree BIOS 2:** Updates the BIOS using a floppy disk or the motherboard Support CD when the BIOS file fails or gets corrupted.
3. **ASUS EZ Flash 2:** Updates the BIOS using a floppy disk or USB flash disk during POST.
4. **ASUS Update:** Updates the BIOS in Windows® environment.

Refer to the corresponding sections for details on these utilities.

- Save a copy of the original motherboard BIOS file to a bootable floppy disk or USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS file using the ASUS Update or AwardBIOS Flash utilities.
- All the floppy devices mentioned in this chapter are USB floppy devices.
- The BIOS screens in this chapter are for reference only. The actual BIOS screen displays may not be the same as shown.

4.1.1 Creating a bootable floppy disk

1. Create a bootable floppy disk:

DOS environment

a. Insert a 1.44MB floppy disk into the floppy disk drive.
b. At the DOS prompt, type `format A:/S` then press **<Enter>**.

Windows® XP environment

a. Insert a 1.44MB floppy disk into the floppy disk drive.
b. Click **Start** from the Windows® desktop, then select **My Computer**.
c. Right-click the 3 1/2 Floppy Drive icon, then select **Format**.
d. Select the **Create an MS-DOS startup disk** checkbox.
e. Click **Start**.

Windows® Vista environment

a. Insert a formatted, high density 1.44MB floppy disk into the floppy disk drive.

b. Click from the Windows® desktop, then select **Computer**.

c. Right-click **Floppy Disk Drive**, then click **Format**.

d. Select the **Create an MS-DOS startup disk** checkbox.

e. Click **Start**.

2. Copy the original or the latest motherboard BIOS file to the bootable floppy disk.

4.1.2 AwardBIOS flash utility

The AwardBIOS flash utility allows you to update the BIOS in DOS environment using a bootable floppy disk, USB flash disk, or CD ROM with the updated BIOS file. This utility also allows you to copy the current BIOS file that you can use as backup when the BIOS fails or gets corrupted during the updating process.

Updating the BIOS

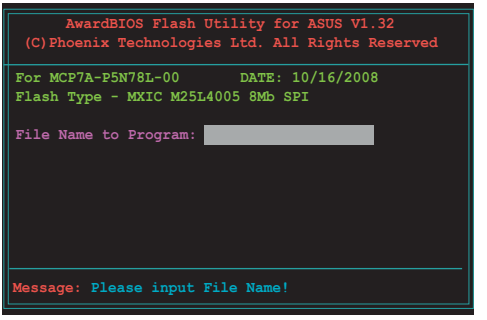
To update the BIOS using the AwardBIOS flash utility:

1. Download the latest BIOS file for this motherboard from the ASUS website at www.asus.com. Rename the file to **P5N78L.BIN** and save it to a bootable floppy disk, USB flash disk, or CD ROM in FAT 16/12 format.

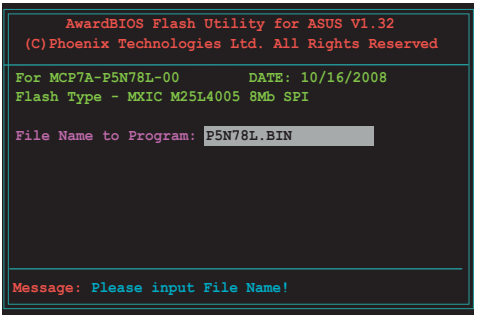
Save only the updated BIOS file in the disk to avoid loading the wrong BIOS file.

2. Copy the AwardBIOS flash utility (awdflash.exe) from the motherboard Support CD to the bootable floppy disk, USB flash disk, or CD ROM.
3. Boot the system in DOS mode using the bootable floppy disk, USB flash disk, or CD ROM.
4. Under the DOS mode, use <X:> (X stands for the name of the disk assignment) to switch to the folder of the disk you saved the BIOS file and the AwardBIOS flash utility.

5. At the prompt, type **awdflash** then press **<Enter>**. The AwardBIOS Flash Utility screen appears.

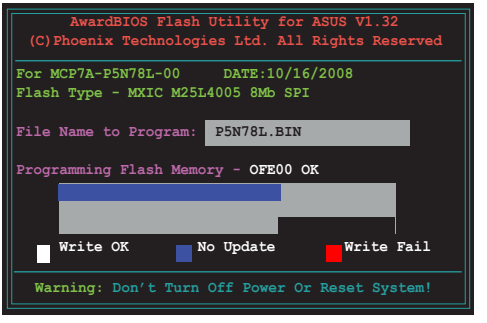

AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE: 10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program:
Message: Please input File Name!

6. Key in the BIOS filename in the **File Name to Program** field, then press **<Enter>**.


AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE: 10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program: P5N78L.BIN
Message: Please input File Name!

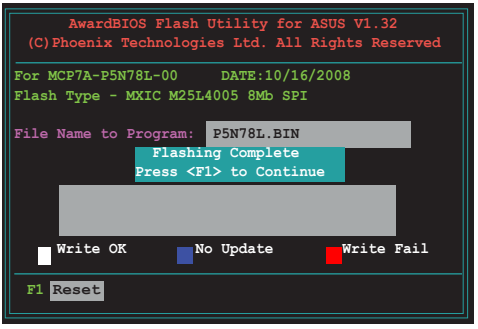
7. Press **<N>** when the utility prompts you to save the current BIOS file. The following screen appears.

8. The utility verifies the BIOS file in the floppy disk, USB flash disk, or CD ROM and starts flashing the BIOS file.


AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE:10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program: P5N78L.BIN
Programming Flash Memory - OFE00 OK
Write OK
No Update
Write Fail
Warning: Don't Turn Off Power Or Reset System!

DO NOT turn off or reset the system during the flashing process!

9. The utility displays a **Flashing Complete** message indicating that you have successfully flashed the BIOS file. Remove the floppy disk, USB flash disk, or CD ROM, then press **<F1>**

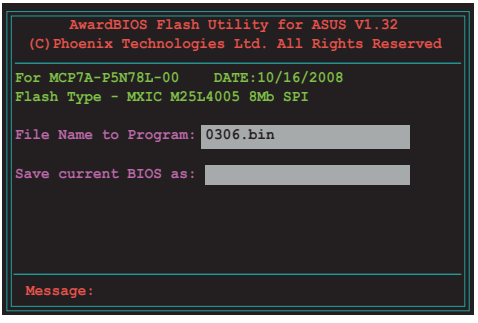


Saving the current BIOS

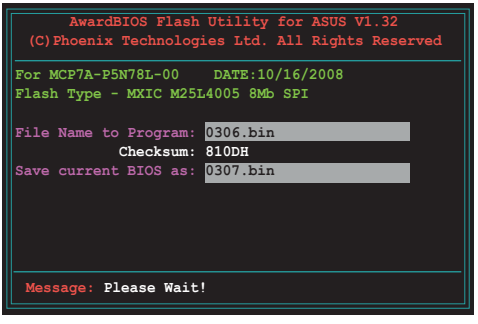
To save the current BIOS:

Ensure that the floppy disk, USB flash disk, or CD ROM is not write-protected and has enough free space to save the file.

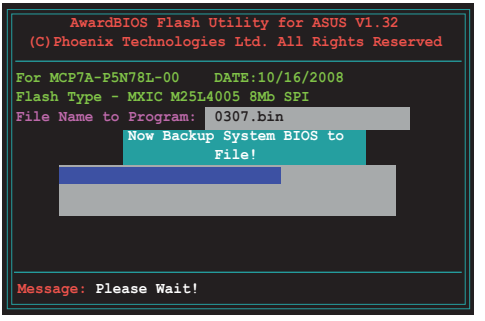
1. Follow steps 1 to 6 in **Updating the BIOS**.
2. Press **<Y>** when the utility prompts you to save the current BIOS file. The following screen appears.


AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE:10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program: 0306.bin
Save current BIOS as:
Message:

3. Key in a filename for the current BIOS file in the **Save current BIOS as** field, then press **<Enter>**.


AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE:10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program: 0306.bin
Checksum: 810DH
Save current BIOS as: 0307.bin
Message: Please Wait!

4. The utility saves the current BIOS file to the disk, then returns to the BIOS flashing process.


AwardBIOS Flash Utility for ASUS V1.32
(C) Phoenix Technologies Ltd. All Rights Reserved
For MCP7A-P5N78L-00 DATE:10/16/2008
Flash Type - MXIC M25L4005 8Mb SPI
File Name to Program: 0307.bin
Now Backup System BIOS to File!
Message: Please Wait!

4.1.3 ASUS CrashFree BIOS 2 utility

The ASUS CrashFree BIOS 2 utility is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can update a corrupted BIOS file using the motherboard Support CD or a floppy disk that contains the updated BIOS file.

- Prepare the motherboard Support CD or a floppy disk containing the updated motherboard BIOS file before using this utility.
- Ensure that you rename the original or updated BIOS file in the floppy disk to **P5N78L.ROM.**

Recovering the BIOS from a floppy disk

To recover the BIOS from a floppy disk:

1. Turn on the system.
2. Insert the floppy disk with the original or updated BIOS file into the floppy disk drive.

   The utility displays the following message and automatically checks the floppy disk for the original or updated BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for floppy...
```

When the original or updated BIOS file is found, the utility reads it and starts updating the corrupted BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for floppy...
Floppy found!
Reading file "P5N78L.ROM". Completed.
Start flashing...
```

DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

3. Restart the system after the utility completes the updating process.

Recovering the BIOS from the Support CD

To recover the BIOS from the Support CD:

1. Remove any floppy disk from the floppy disk drive, then turn on the system.
2. Place the Support CD into the optical drive.

   The utility displays the following message and automatically checks the floppy disk for the original or updated BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for floppy...
```

   When no floppy disk is found, the utility automatically checks the optical drive for the original or updated BIOS file. The utility then updates the corrupted BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for floppy...
Floppy not found!
Checking for CD-ROM...
CD-ROM found!
Reading file "P5N78L.ROM". Completed.
Start flashing...
```

3. Restart the system after the utility completes the updating process.

The recovered BIOS may not be the latest BIOS version for this motherboard. Visit the ASUS website at www.asus.com to download the latest BIOS file.

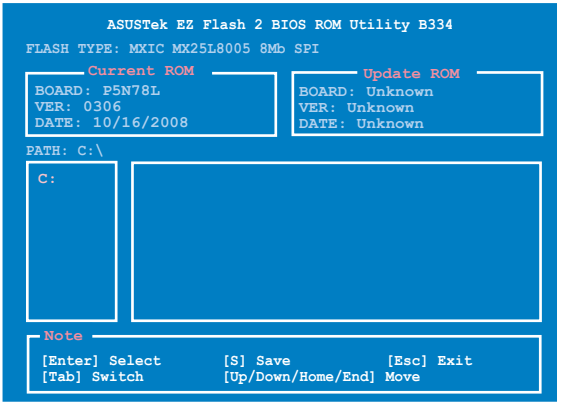
4.1.4 ASUS EZ Flash 2 utility

The ASUS EZ Flash 2 feature allows you to update the BIOS without having to go through the long process of booting from a floppy disk and using a DOS-based utility. The EZ Flash 2 utility is built in the BIOS chip so it is accessible by pressing **<Alt> + <F2>** during the Power-On Self-Test (POST).

To update the BIOS using EZ Flash 2:

1. Visit the ASUS website at www.asus.com to download the latest BIOS file for this motherboard.
2. Save the BIOS file to a floppy disk or USB flash disk, then restart the system.
3. Launch EZ Flash 2 using either of the following methods.
   - Insert the floppy disk / USB flash disk that contains the BIOS file to the floppy disk drive or a USB port.

     Press **<Alt> + <F2>** during POST to display the following.



   - Insert the floppy disk / USB flash disk that contains the BIOS file to the floppy disk drive or a USB port.

     Press **<Del>** during POST to enter the BIOS Setup utility. Go to the **Tools** menu, then select **EZ Flash2** and press **<Enter>**.

4. Press **<Tab>** to locate the correct file. Then press **<Enter>**. When the correct BIOS file is found, EZ Flash 2 performs the BIOS update process and automatically reboots the system when done.

- This function supports devices such as USB flash disks and floppy disks with **FAT 32/16** format and single partition only.
- **DO NOT** shut down or reset the system while updating the BIOS to prevent system boot failure!

4.1.5 ASUS Update utility

The ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® environment. The ASUS Update utility allows you to:

- Save the current BIOS file;
- Download the latest BIOS file from the Internet;
- Update the BIOS from an updated BIOS file;
- Update the BIOS directly from the Internet; and
- View the BIOS version information.

This utility is available in the Support CD that comes with the motherboard package.

ASUS Update requires an Internet connection either through a network or an Internet Service Provider (ISP).

Installing ASUS Update

To install ASUS Update:

1. Place the Support CD into the optical drive. The **Drivers** menu appears.
2. Click the **Utilities** tab, then click **ASUS Update**.

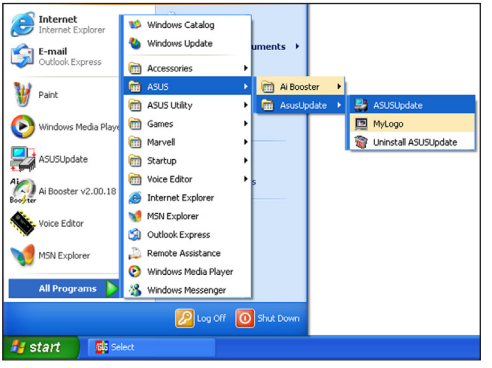
The ASUS Update utility is copied to your system.

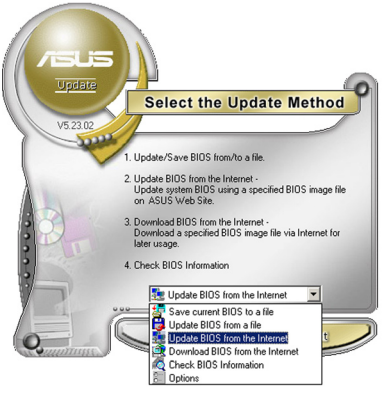
Quit all Windows® applications before you update the BIOS using this utility.

Updating the BIOS through the Internet

To update the BIOS through the Internet:

1. Launch the ASUS Update utility from the Windows® desktop by clicking **Start > Programs > ASUS > ASUSUpdate > ASUSUpdate**. The ASUS Update main window appears.



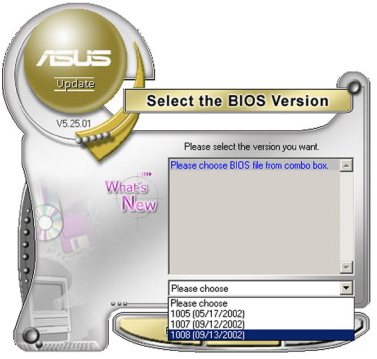

Update
V5.23.02
Select the Update Method
1. Update/Save BIOS from/to a file.
2. Update BIOS from the Internet -
Update system BIOS using a specified BIOS image file on ASUS Web Site.
3. Download BIOS from the Internet -
Download a specified BIOS image file via Internet for later usage.
4. Check BIOS Information
Update BIOS from the Internet
Save current BIOS to a file
Update BIOS from a file
Update BIOS from the Internet
Download BIOS from the Internet
Check BIOS Information
Options

Update
V5.23.02
Select the Update Server
Before Continue, please make sure that your system is connected to the Internet. You can then choose a web site by yourself or click AutoSelect button, ASUS Update will choose the best site based on network traffic automatically for you.
Passive
Proxy Setting
Auto Select
ftp.asus.com.tw
Back
Cancel
Next

2. Select **Update BIOS from the Internet** option from the dropdown menu, then click **Next**.

3. Select the ASUS FTP site nearest you to avoid network traffic, or click **Auto Select**. Click **Next**.

4. From the FTP site, select the BIOS version that you want to download. Click **Next.**
5. Follow the onscreen instructions to complete the update process.

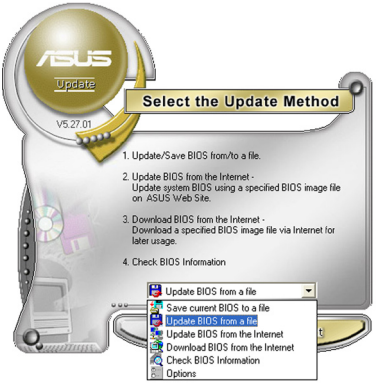


The ASUS Update utility is capable of updating itself through the Internet. Always update the utility to get all its features.

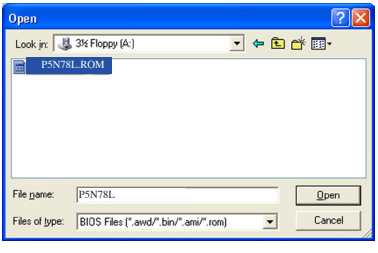
Updating the BIOS through a BIOS file

To update the BIOS through a BIOS file:

1. Launch the ASUS Update utility from the Windows® desktop by clicking **Start > Programs > ASUS > ASUSUpdate > ASUSUpdate**. The ASUS Update main window appears.
2. Select **Update BIOS from a file** option from the dropdown menu, then click **Next**.


Update
V5.27.01
Select the Update Method
1. Update/Save BIOS from/to a file.
2. Update BIOS from the Internet - Update system BIOS using a specified BIOS image file on ASUS Web Site.
3. Download BIOS from the Internet - Download a specified BIOS image file via Internet for later usage.
4. Check BIOS Information
Update BIOS from a file
Save current BIOS to a file
Update BIOS from a file
Update BIOS from the Internet
Download BIOS from the Internet
Check BIOS Information
Options

3. Locate the BIOS file from the **Open** window, then click **Open**.
4. Follow the onscreen instructions to complete the update process.



4.2 BIOS setup program

This motherboard supports a programmable firmware chip that you can update using the provided utility described in section **4.1 Managing and updating your BIOS**.

Use the BIOS Setup program when you are installing a motherboard, reconfiguring your system, or prompted to "Run Setup." This section explains how to configure your system using this utility.

Even if you are not prompted to use the Setup program, you can change the configuration of your computer in the future. For example, you can enable the security password feature or change the power management settings. This requires you to reconfigure your system using the BIOS Setup program so that the computer can recognize these changes and record them in the CMOS RAM of the SPI chip.

The firmware chip on the motherboard stores the Setup utility. When you start up the computer, the system provides you with the opportunity to run this program. Press **<Del>** during the Power-On Self-Test (POST) to enter the Setup utility. 0therwise, POST continues with its test routines.

If you wish to enter Setup after POST, reboot the system by doing any of the following procedures:

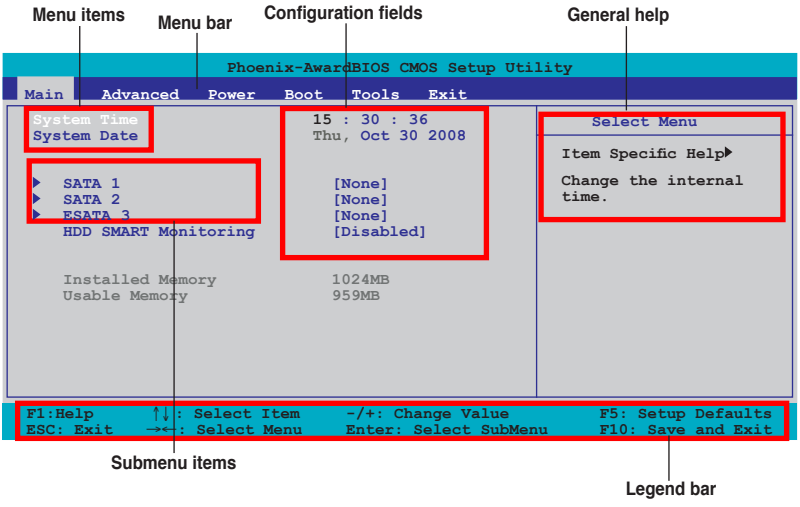
- Restart using the OS standard shut-down procedure.
- Press **<Ctrl>+<Alt>+<Del>** simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on.

Using the **power button**, **reset button**, or the **<Ctrl>+<Alt>+<Del>** keys to force reset from a running operating system can cause damage to your data or system. We recommend to always shut-down the system properly from the operating system.

The Setup program is designed to make it as easy to use as possible. Being a menu-driven program, it lets you scroll through the various submenus and make your selections from the available options using the navigation keys.

- The default BIOS settings for this motherboard apply for most conditions to ensure optimum performance. If the system becomes unstable after changing any BIOS settings, load the default settings to ensure system compatibility and stability. Select the **Load Setup Defaults** item under the Exit menu. See section **4.8 Exit menu**.
- The BIOS setup screens shown in this section are for reference only. They may not exactly match what you see on your screen.
- Visit the ASUS website at www.asus.com to download the latest BIOS file for this motherboard.

4.2.1 BIOS menu screen



4.2.2 Menu bar

The menu bar on top of the screen has the following main items:

Main	For changing the basic system configuration
Advanced	For changing the advanced system settings
Power	For changing the advanced power management (APM) configuration
Boot	For changing the system boot configuration
Tools	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

To select an item on the menu bar, press the right or left arrow key on the keyboard until the desired item is highlighted.

- The BIOS setup screens shown in this chapter are for reference only. They may not exactly match what you see on your screen.
- Visit the ASUS website at www.asus.com to download the latest BIOS file.

4.2.3 Legend bar

At the bottom of the setup screen is a legend bar. The keys in the legend bar allow you to navigate through the various setup menus. The following table lists the keys found in the legend bar with their corresponding functions.

Navigation Key	Function
<F1>	Displays the General Help screen
<F5>	Loads setup default values
<Esc>	Exits the BIOS setup or returns to the main menu from a sub-menu
Left or Right arrow	Selects the menu item to the left or right
Up or Down arrow	Moves the highlight up or down between fields
Page Down or – (minus)	Scrolls backward through the values for the highlighted field
Page Up or + (plus)	Scrolls forward through the values for the highlighted field
<Enter>	Brings up a selection menu for the highlighted field
<F10>	Saves changes and exit

4.2.4 Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting **Main** shows the Main menu items.

The other items (Advanced, Power, Boot, Tools, and Exit) on the menu bar have their respective menu items.

4.2.5 Submenu items

A solid triangle before each item on each menu screen means that the item has a submenu. To display the submenu, select the item and press **<Enter>**.

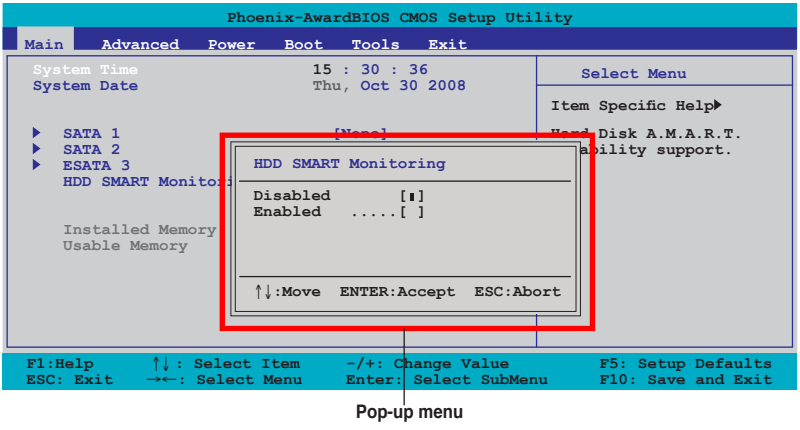
4.2.6 Configuration fields

These fields show the values for the menu items. If an item is user-configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable.

A configurable field is enclosed in brackets, and is highlighted when selected. To change the value of a field, select it then press **<Enter>** to display a list of options. Refer to **4.2.7 Pop-up window**.

4.2.7 Pop-up window

Select a menu item then press **<Enter>** to display a pop-up window with the configuration options for that item.



Pop-up menu

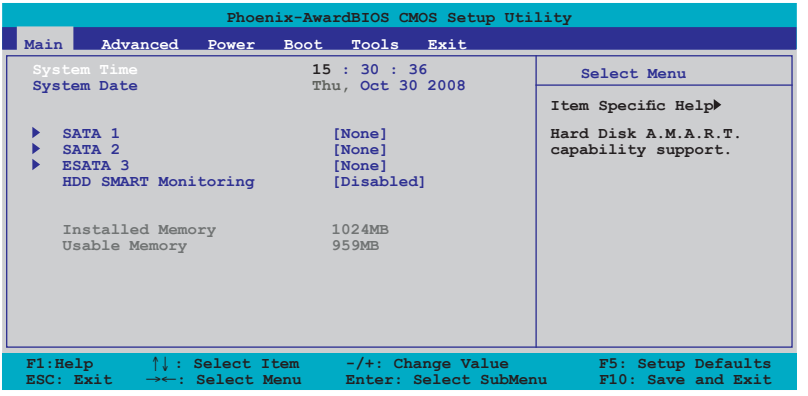
4.2.8 General help

At the top right corner of the menu screen is a brief description of the selected item.

4.3 Main menu

When you enter the BIOS Setup program, the Main menu screen appears, giving you an overview of the basic system information.

Refer to sections **4.2.1 - 4.2.8** for information on the menu screen items and how to navigate through them.



4.3.1 System Time [xx:xx:xx]

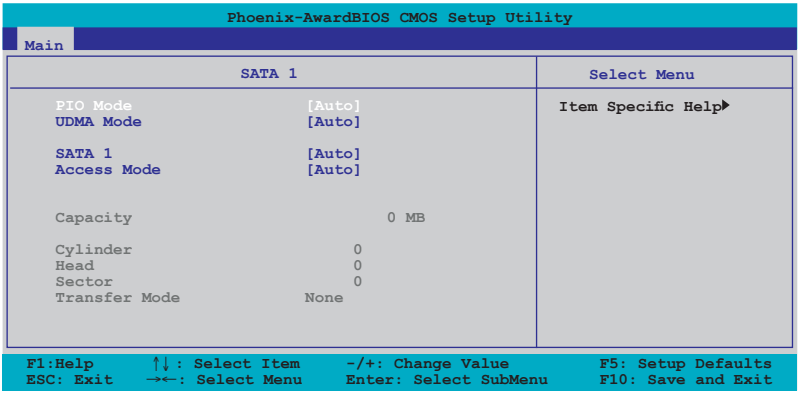
Allows you to set the system time.

4.3.2 System Date [Day xx/xx/xxxx]

Allows you to set the system date.

4.3.3 SATA 1-2

While entering Setup, the BIOS automatically detects the presence of SATA devices. There is a separate submenu for each SATA device. Select a device item then press **<Enter>** to display the SATA device information.



The BIOS automatically detects the values opposite the dimmed items (Capacity, Cylinder, Head, Sector, and Transfer Mode). These values are not user-configurable. These items show **0** if no SATA device is installed in the system.

PIO Mode [Auto]

Selects the PIO mode. Configuration options: [Auto] [Mode 0] [Mode 1] [Mode 2] [Mode 3] [Mode 4]

UDMA Mode [Auto]

Selects the UDMA mode. Configuration options: [Disabled] [Auto]

SATA 1 [Auto]

Allows you to enable or disable SATA 1. Configuration options: [None] [Auto] [Manual]

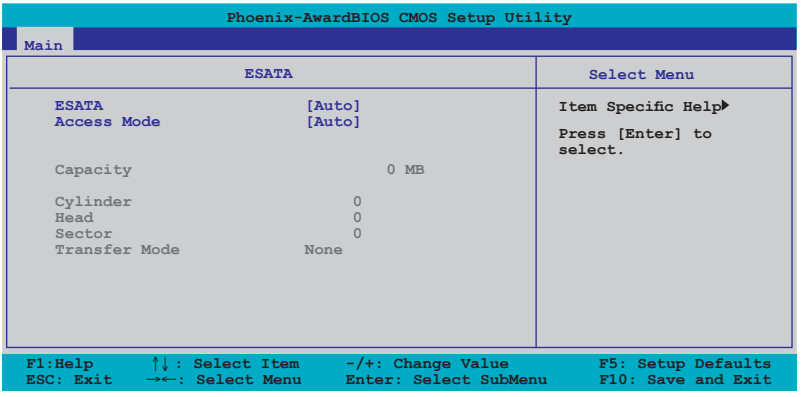
Access Mode [Auto]

Sets the sector addressing mode. Configuration options: [CHS] [LBA] [Large] [Auto]

Before configuring a hard disk drive, ensure that you have the correct configuration information supplied by the drive manufacturer. Incorrect settings may cause the system to fail to recognize the installed hard disk.

4.3.4 ESATA

While entering Setup, the BIOS automatically detects the presence of an eSATA device. There is a separate submenu for the eSATA device. Select a device item then press **<Enter>** to display the eSATA device information.



The BIOS automatically detects the values opposite the dimmed items (Capacity, Cylinder, Head, Sector, and Transfer Mode). These values are not user-configurable. These items show **0** if no eSATA device is installed in the system.

ESATA [Auto]

Allows you to enable or disable ESATA. Configuration options: [None] [Auto] [Manual]

Access Mode [Auto]

Sets the sector addressing mode. Configuration options: [CHS] [LBA] [Large] [Auto]

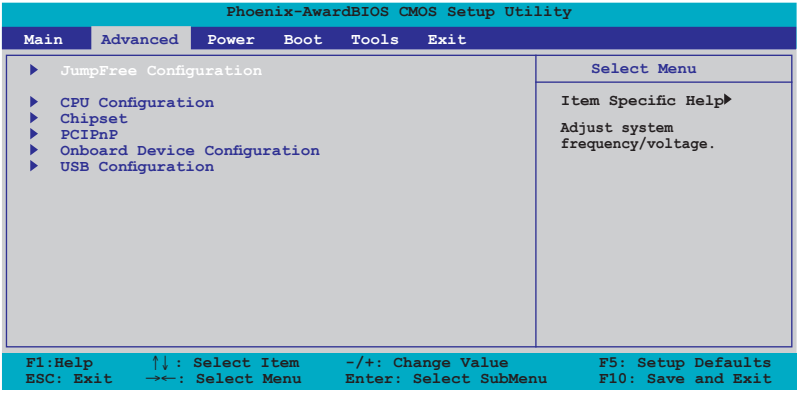
Before configuring a hard disk drive, ensure that you have the correct configuration information supplied by the drive manufacturer. Incorrect settings may cause the system to fail to recognize the installed hard disk.

4.3.5 HDD SMART Monitoring [Disabled]

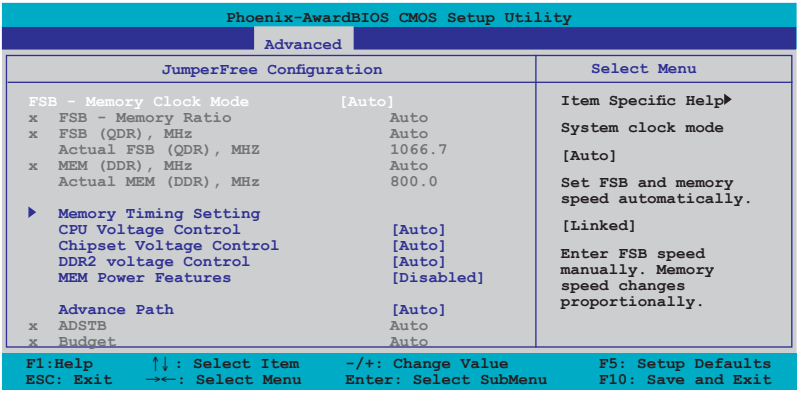
Allows you to enable or disable the HDD Self-Monitoring Analysis and Reporting Technology (SMART) feature. Configuration options: [Disabled] [Enabled]

4.4 Advanced menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.



4.4.1 JumperFree Configuration



FSB - Memory Clock Mode [Auto]

Allows you to set the system clock mode. Configuration options: [Auto] [Linked] [Unlinked]

The following items become user-configurable when you set the **FSB-Memory Clock Mode** item to **[Linked]**.

FSB - Memory Ratio [Auto]

Configuration options: [Auto] [Sync Mode]

FSB (QDR), MHz [1066]

Allows you to adjust the CPU FSB frequency. Use the <+> and <-> keys to adjust the frequency. You can also type the desired frequency using the numeric keypad. The values range from 400 to 2500.

The **FSB (QDR), MHz** item is also configurable when you set the **FSB - Memory Clock Mode** item to **[Unlinked]**.

Actual FSB (QDR), MHz

This item reflects the actual frequency after the system reboots.

The following item becomes user-configurable when you set **FSB-Memory Clock Mode** to **[Unlinked]**.

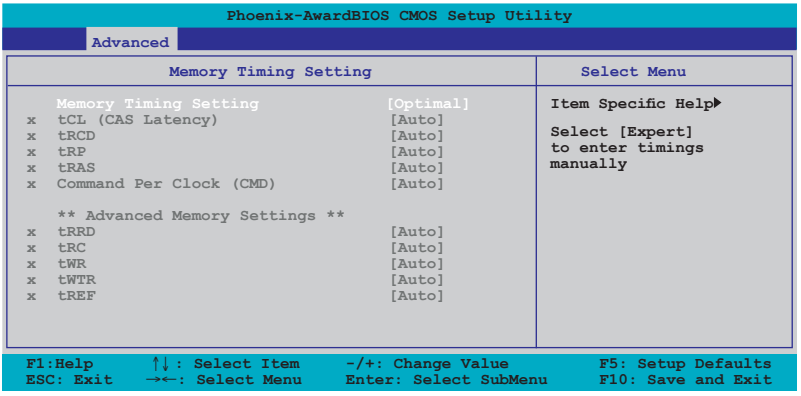
MEM (DDR), MHz [799]

Allows you to adjust memory frequency. Use the <+> and <-> keys to adjust the frequency. You can also type the desired frequency using the numeric keypad. The values range from 400 to 1400.

Actual MEM (DDR), MHz

This item reflects the actual frequency after the system reboots.

Memory Timing Setting


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
Memory Timing Setting
Select Menu
Memory Timing Setting [Optimal]
x tCL (CAS Latency) [Auto]
x tRCD [Auto]
x tRP [Auto]
x tRAS [Auto]
x Command Per Clock (CMD) [Auto]
** Advanced Memory Settings **
x tRRD [Auto]
x tRC [Auto]
x tWR [Auto]
x tWTR [Auto]
x tREF [Auto]
Item Specific Help
Select [Expert] to enter timings manually
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Memory Timing Setting [Optimal]
Allows you to load the optimal timings or enter timings manually.
Configuration options: [Optimal] [Expert]

tCL (CAS Latency) [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]

tRCD [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]

tRP [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]

tRAS [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]~[31]

Command Per Clock (CMD) [Auto]
Configuration options: [Auto] [1 clock] [2 clock]

tRRD [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]~[15]

tRC [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]~[31]

tWR [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6]

tWTR [Auto]
Configuration options: [Auto] [1] [2] [3] [4] [5] [6] [7]~[15]

tREF [Auto]
Configuration options: [Auto] [7.8uS] [3.9uS]

CPU Voltage Control [Auto]

Allows you to select the CPU voltage. Configuration options: [Auto] [0.81875V] [0.825V] [0.83125V] [0.8375V] [0.84375V] [0.85V] [0.85625V] [0.8625] [0.86875V] [0.875V] [0.88125V] [0.8875V] [0.89375V] [0.9V] [0.90625V] [0.9125V] [0.91875V] [0.925V] [0.93125V] [0.9375V] [0.94375V] [0.95V] [0.95625V]~ [1.6V]

Refer to the CPU documentation before setting the CPU voltage. Setting a high voltage may damage the CPU permanently, and setting a low voltage may make the system unstable.

Chipset Voltage Control [Auto]

Allows you to select the chipset voltage. Configuration options: [Auto] [1.05V] [1.10V] [1.15V] [1.20V] [1.25V] [1.30V]~ [1.40V]

DDR2 Voltage Control [Auto]

Allows you to select the DDR2 voltage. Configuration options: [Auto] [1.75V] [1.80V] [1.85V] [1.90V] [1.95V] [2.00V] [2.05V] [2.10V]

MEM Power Features [Disabled]

Allows you to enable or disable the MEM power features.
Configuration options: [Disabled] [Enabled]

Advance Path [Auto]

Allows you to enable or disable the advance path.
Configuration options: [Auto] [Enable] [Disable]

The following items become configurable when you set the **Advance Path** item to **[Enable]**.

ADSTB [2]

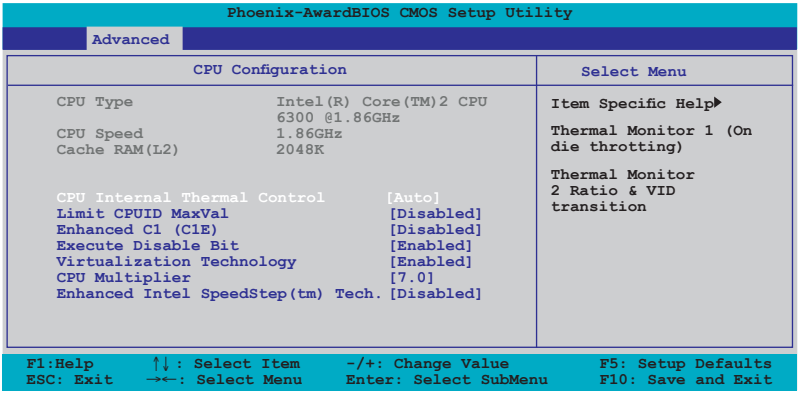
Configuration options: [Auto] [0] [1] [2] [3]

Budget [3.00 ns]

Configuration options: [Auto] [1.50 ns] [1.75 ns] [2.00 ns] [2.25 ns] ~ [3.75 ns]

4.4.2 CPU Configuration

The items in this menu show the CPU-related information that the BIOS automatically detects.


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
CPU Configuration
Select Menu
CPU Type
Intel(R) Core(TM)2 CPU 6300 @1.86GHz
CPU Speed
1.86GHz
Cache RAM(L2)
2048K
CPU Internal Thermal Control [Auto]
Limit CPUID MaxVal [Disabled]
Enhanced C1 (C1E) [Disabled]
Execute Disable Bit [Enabled]
Virtualization Technology [Enabled]
CPU Multiplier [7.0]
Enhanced Intel SpeedStep(tm) Tech. [Disabled]
Item Specific Help
Thermal Monitor 1 (On die throtting)
Thermal Monitor 2 Ratio & VID transition
F1:Help ↑↓ : Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

CPU Internal Thermal Control [Auto]

Configuration options: [Auto] [Disabled]

Limit CPUID MaxVal [Disabled]

Setting this item to **[Enabled]** allows legacy operating systems to boot even without support for CPUs with extended CPUID functions.
Configuration options: [Disabled] [Enabled]

Enhanced C1 (CIE) [Disabled]

Allows you to enable or disable C1E Support.
Configuration options: [Enabled] [Disabled]

Execute Disable Bit [Enabled]

Allows you to enable or disable the No-Execution Page Protection Technology. Setting this item to **[Disabled]** forces the XD feature flag to always return to zero (0). Configuration options: [Enabled] [Disabled]

Virtualization Technology [Enabled]

The Virtualization Technology allows a hardware platform to run multiple operating systems simultaneously, enabling one system to virtually function as several systems. Configuration options: [Enabled] [Disabled]

CPU Multiplier [7.0]

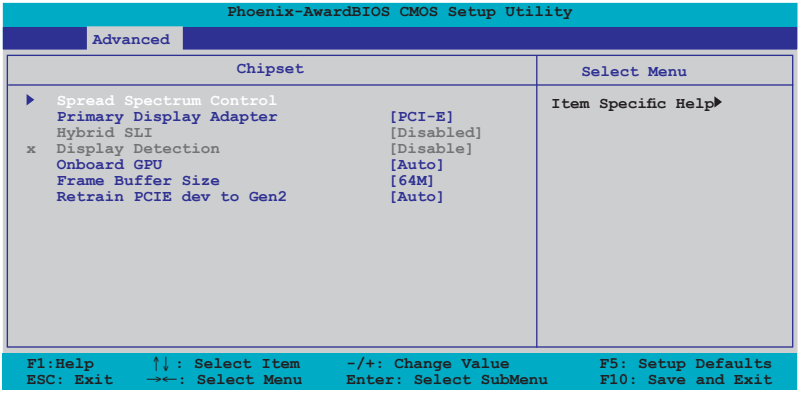
Sets the CPU multiplier. Configuration options: [6.0] [7.0]

Enhanced Intel SpeedStep™ Tech. [Disabled]

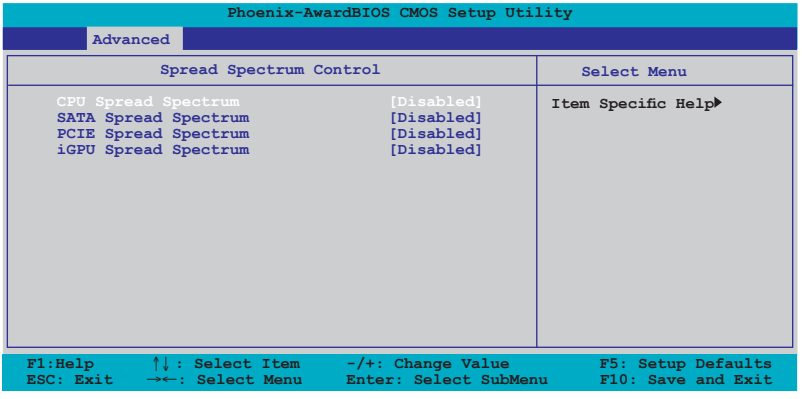
Configuration options: [Disabled] [Enabled]

4.4.3 Chipset

The Chipset menu allows you to change the advanced chipset settings. Select an item then press **<Enter>** to display the submenu.


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
Chipset
Select Menu
Spread Spectrum Control
Primary Display Adapter [PCI-E]
Hybrid SLI [Disabled]
x Display Detection [Disable]
Onboard GPU [Auto]
Frame Buffer Size [64M]
Retrain PCIE dev to Gen2 [Auto]
Item Specific Help
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Spread Spectrum Control


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
Spread Spectrum Control
Select Menu
CPU Spread Spectrum [Disabled]
SATA Spread Spectrum [Disabled]
PCIE Spread Spectrum [Disabled]
iGPU Spread Spectrum [Disabled]
Item Specific Help
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

CPU Spread Spectrum [Disabled]
Configuration options: [Disabled] [Enabled]

SATA Spread Spectrum [Disabled]
Configuration options: [Disabled] [Triangular Down]

PCIE Spread Spectrum [Disabled]
Configuration options: [Disabled] [Triangular Down]

iGPU Spread Spectrum [Disabled]
Configuration options: [Disabled] [1.00% Tri-Center] [2.00% Tri-Center] [3.00% Tri-Center]

Primary Display Adapter [PCI-E]

Allows you to select the primary display adapter.
Configuration options: [PCI] [Onboard] [PCI-E]

Onboard GPU [Auto]

Allows you to configure the onboard GPU.
Configuration options: [Auto] [Always Enable]

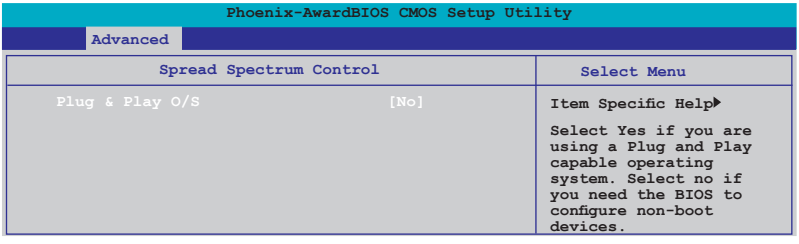
Frame Buffer Size [64M]

Allows you to select the frame buffer size. Configuration options: [32M] [64M] [128M] [256M] [512M] [Disabled]

Retrain PCIE dev to Gen2 [Auto]

Configuration options: [Auto] [Disabled]

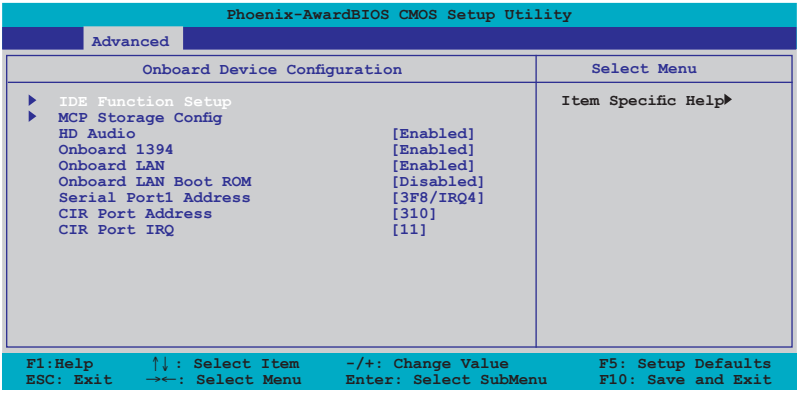
4.4.4 PCIPnP


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
Spread Spectrum Control
Select Menu
Plug & Play O/S [No]
Item Specific Help
Select Yes if you are using a Plug and Play capable operating system. Select no if you need the BIOS to configure non-boot devices.

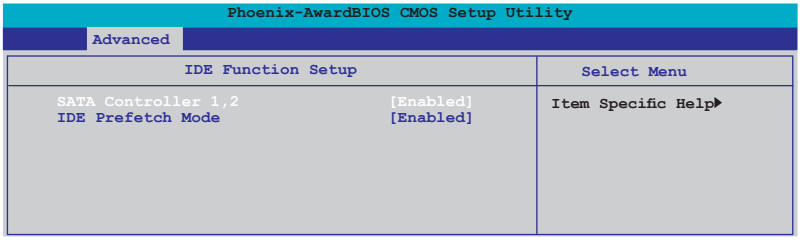
Plug & Play O/S [No]

When set to **[No]**, the BIOS configures all the devices in the system. When set to **[Yes]** and if you install a Plug and Play operating system, the operating system configures the Plug and Play devices not required for boot.
Configuration options: [No] [Yes]

4.4.5 Onboard Device Configuration


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
Onboard Device Configuration
Select Menu
IDE Function Setup
MCP Storage Config
HD Audio [Enabled]
Onboard 1394 [Enabled]
Onboard LAN [Enabled]
Onboard LAN Boot ROM [Disabled]
Serial Port1 Address [3F8/IRQ4]
CIR Port Address [310]
CIR Port IRQ [11]
Item Specific Help
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

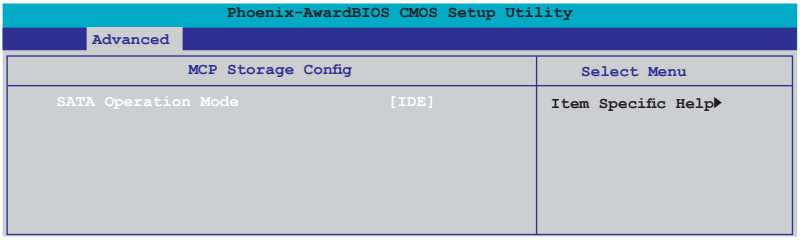
IDE Function Setup



SATA Controller 1,2 [Enabled]
Allows you to enable or disable the onboard SATA controllers.
Configuration options: [Disabled] [Enabled]

IDE Prefetch Mode [Enabled]
Allows you to enable or disable the IDE PIO read prefetch mode.
Configuration options: [Disabled] [Enabled]

MCP Storage Config



SATA Operation MOde [IDE]
Allows you to select the SATA operation mode.
Configuration options: [IDE] [RAID] [AHCI] [Linux AHCI]

HD Audio [Enabled]

Allows you to disable or set the High-Definition audio function.
Configuration options: [Enabled] [Disabled]

Onboard 1394 [Enabled]

Allows you to disable or enable the onboard 1394 device.
Configuration options: [Disabled] [Enabled]

Onboard LAN [Enabled]

Allows you to enable or disable the onboard LAN controller.
Configuration options: [Disabled] [Enabled]

Onboard LAN Boot ROM [Disabled]

Allows you to enable or disable the onboard LAN boot ROM.
Configuration options: [Enabled] [Disabled]

Serial Port1 Address [3F8/IRQ4]

Allows you to select the Serial Port1 base address.
Configuration options: [Disabled] [3F8/IRQ4] [2F8/IRQ3] [3E8/IRQ4] [2E8/IRQ3] [Auto]

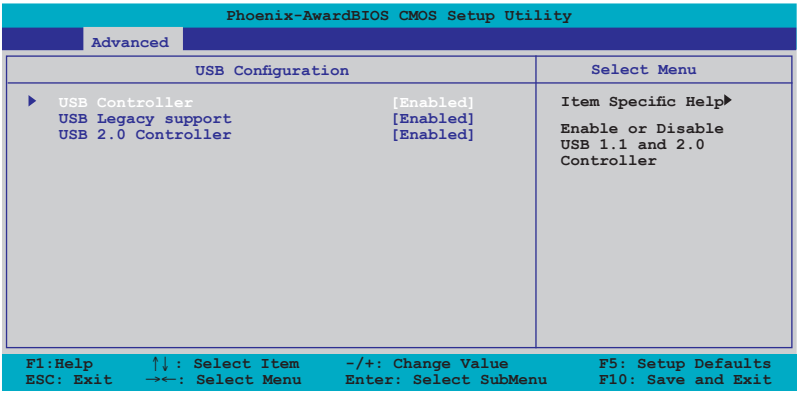
CIR Port Address [310]

Allows you to select the CIR port address.
Configuration options: [Disabled] [310] [320]

CIR Port IRQ [11]

Allows you to select the CIR port IRQ. Configuration options: [11] [5]

4.4.6 USB Configuration


Phoenix-AwardBIOS CMOS Setup Utility
Advanced
USB Configuration
Select Menu
USB Controller [Enabled]
USB Legacy support [Enabled]
USB 2.0 Controller [Enabled]
Item Specific Help
Enable or Disable USB 1.1 and 2.0 Controller
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

USB Controller [Enabled]

Allows you to enable or disable the USB 2.0/1.1 controller.
Configuration options: [Disabled] [Enabled]

USB Legacy Support [Enabled]

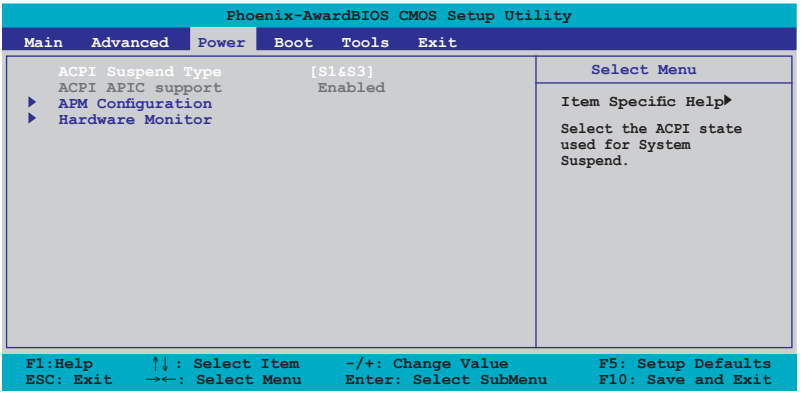
Allows you to enable or disable support for USB devices on legacy operating systems (OS). Configuration options: [Disabled] [Enabled]

USB 2.0 Controller [Enabled]

Allows you to enable or disable the USB 2.0 controller.
Configuration options: [Disabled] [Enabled]

4.5 Power menu

The Power menu items allow you to change the settings for the Advanced Configuration and Power Interface (ACPI) and the Advanced Power Management (APM). Select an item then press **<Enter>** to display the configuration options.


Phoenix-AwardBIOS CMOS Setup Utility
Main Advanced Power Boot Tools Exit
ACPI Suspend Type [S1&S3]
ACPI APIC support Enabled
APM Configuration
Hardware Monitor
Select Menu
Item Specific Help
Select the ACPI state used for System Suspend.
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

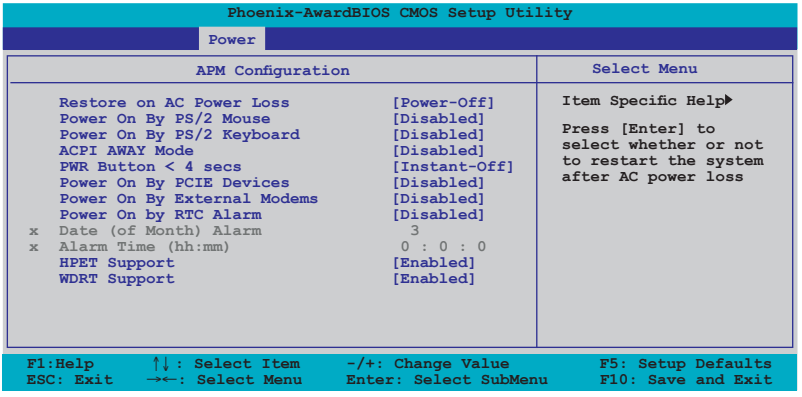
4.5.1 ACPI Suspend Type [S1&S3]

Allows you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend.
Configuration options: [S1 (POS)] [S3 (STR)] [S1&S3]

4.5.2 ACPI APIC Support [Enabled]

Allows you to enable or disable the Advanced Configuration and Power Interface (ACPI) support in the Application-Specific Integrated Circuit (ASIC). When this item is set to **[Enabled]**, the ACPI APIC table pointer is included in the RSDT pointer list. Configuration options:[Enabled]

4.5.3 APM Configuration


Phoenix-AwardBIOS CMOS Setup Utility
Power
APM Configuration
Select Menu
Restore on AC Power Loss [Power-Off]
Power On By PS/2 Mouse [Disabled]
Power On By PS/2 Keyboard [Disabled]
ACPI AWAY Mode [Disabled]
PWR Button < 4 secs [Instant-Off]
Power On By PCIE Devices [Disabled]
Power On By External Modems [Disabled]
Power On by RTC Alarm [Disabled]
x Date (of Month) Alarm 3
x Alarm Time (hh:mm) 0 : 0 : 0
HPET Support [Enabled]
WDRT Support [Enabled]
Item Specific Help
Press [Enter] to select whether or not to restart the system after AC power loss
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Restore on AC Power Loss [Power-Off]

Allows you to enable or disable the Restore on AC Power Loss function. Configuration options: [Power-Off] [Power-On] [Last State]

Power On By PS/2 Mouse [Disabled]

When setting this item to **[Enabled]**, you can use the PS/2 mouse to turn on the system. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead. Configuration options: [Disabled] [Enabled]

Power On By PS/2 Keyboard [Disabled]

Allows you to use specific keys on the keyboard to turn on the system. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead. Configuration options: [Disabled] [Space Bar] [Ctrl-Esc] [Power Key]

ACPI AWAY Mode [Disabled]

Allows you to enable or disable the ACPI away mode.
Configuration options: [Disabled] [Enabled]

PWR Button < 4 secs [Instant-Off]

Allows you to set the event after the power button is pressed for more than 4 seconds. Configuration options: [Suspend] [Instant-Off]

Power On By PCIE Devices [Disabled]

When setting this item to **[Enabled]**, you can wake the system through a PCI Express card. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead. Configuration options: [Disabled] [Enabled]

Power On By External Modems [Disabled]

Enables or disables RI to generate a wake event. Configuration options: [Disabled] [Enabled]

The computer cannot receive or transmit data until the computer and applications are fully running. Thus, connection cannot be made on the first try. Turning an external modem off and then back on while the computer is off causes an initialization string that turns the system power on.

Power On By RTC Alarm [Disabled]

Allows you to enable or disable RTC to generate a wake event. When this item is set to **[Enabled]**, the **Date of Month Alarm** and **Alarm Time (hh:mm)** items become user-configurable. Configuration options: [Disabled] [Enabled]

Date (of Month) Alarm [XX]

To set the date of alarm, highlight this item and press **<Enter>** to display the Date of Month Alarm pop-up menu. Key-in a value within the specified range then press **<Enter>**. Value '0' means everyday. Configuration options: [Min=0] [Max=31]

Alarm Time (hh:mm) [X: X: X]

To set the time of alarm:

1. Highlight this item and press **<Enter>** to display a pop-up menu for the hour field.
2. Key in an hour value (Min.=0, Max.=23), then press **<Enter>**.
3. Press **<Tab>** to move to the minutes field then press **<Enter>**.
4. Key in a minute value (Min.=0, Max.=59), then press **<Enter>**.
5. Press **<Tab>** to move to the seconds field then press **<Enter>**.
6. Key in a second value (Min.=0, Max.=59), then press **<Enter>**.

HPET Support [Enabled]

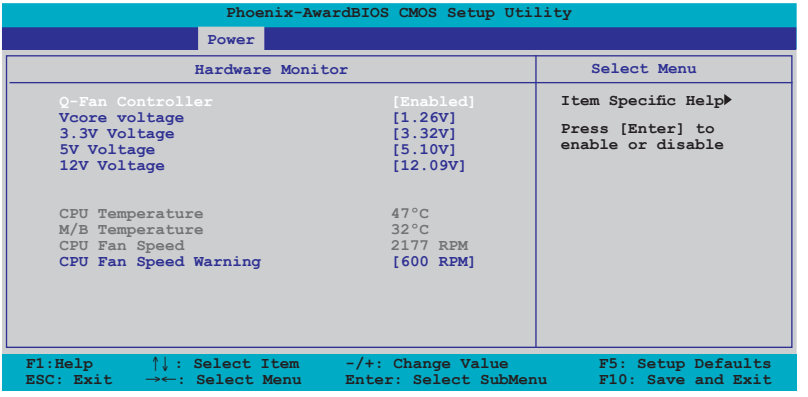
Configuration options: [Disabled] [Enabled]

WDRT Support [Enabled]

Configuration options: [Disabled] [Enabled]

4.5.4 Hardware Monitor

The items in this submenu displays the hardware monitor values automatically detected by the BIOS. It also allows you to change CPU Q-Fan feature-related parameters. Select an item then press **<Enter>** to display the configuration options.


Phoenix-AwardBIOS CMOS Setup Utility
Power
Hardware Monitor
Select Menu
Q-Fan Controller [Enabled]
Vcore voltage [1.26V]
3.3V Voltage [3.32V]
5V Voltage [5.10V]
12V Voltage [12.09V]
CPU Temperature 47°C
M/B Temperature 32°C
CPU Fan Speed 2177 RPM
CPU Fan Speed Warning [600 RPM]
Item Specific Help
Press [Enter] to enable or disable
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Q-Fan Controller [Enabled]

Allows you to enable or disable the Q-Fan controller. Configuration options: [Disabled] [Enabled]

Vcore Voltage, 3.3V Voltage, 5V Voltage, 12V Voltage [xxxV] or [Ignored]

The onboard hardware monitor automatically detects the voltage output through the onboard voltage regulators.

CPU Temperature [xxx°C/xxx°F]

MB Temperature [xxx°C/xxx°F]

The onboard hardware monitor automatically detects and displays the motherboard and CPU temperatures.

CPU Fan Speed [xxxxRPM]

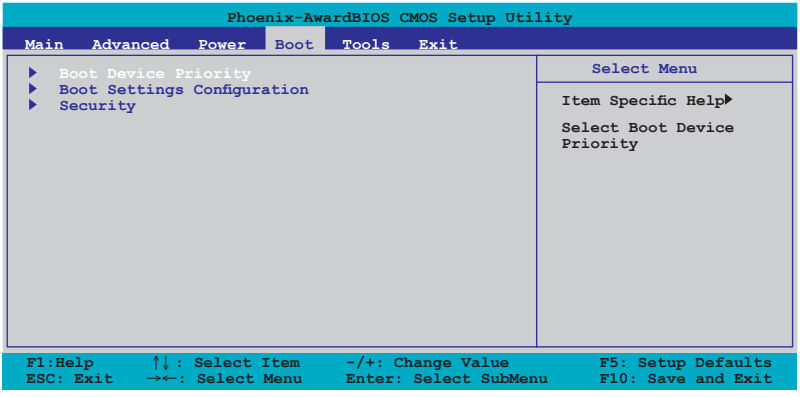
The onboard hardware monitor automatically detects and displays the CPU fan speed in rotations per minute (RPM). If the fan is not connected to the motherboard, the field shows **N/A**.

CPU Fan Speed Warning [600 RPM]

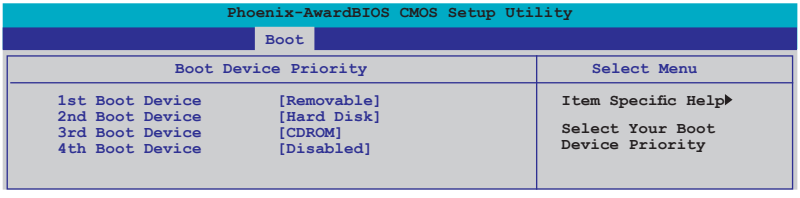
Allows you to set the CPU fan speed warning function, which gives a warning when the CPU fan speed is too slow. If you set this item to **[Disabled]**, the system will not warn you even if no fan is installed or if the fan is not functioning properly. Configuration options: [Disabled] [600 RPM] [1200 RPM] [1600 RPM]

4.6 Boot menu

The Boot menu items allow you to change the system boot options. Select an item then press **<Enter>** to display the submenu.


Phoenix-AwardBIOS CMOS Setup Utility
Main Advanced Power Boot Tools Exit
Boot Device Priority
Boot Settings Configuration
Security
Select Menu
Item Specific Help
Select Boot Device Priority
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

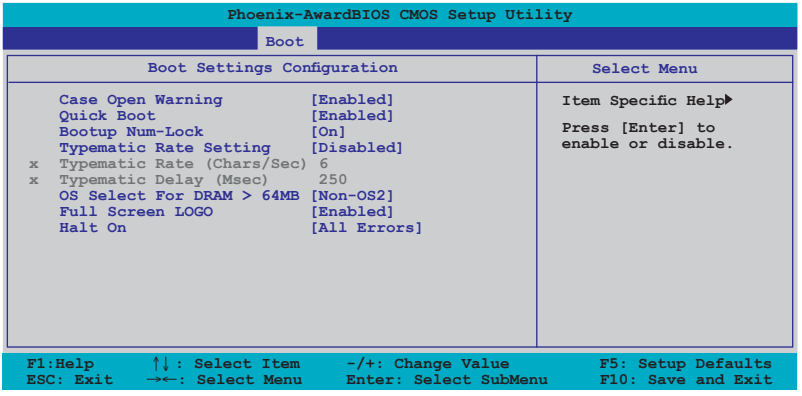
4.6.1 Boot Device Priority



1st ~ 4th Boot Device

These items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Configuration options: [Removable] [Hard Disk] [CDROM] [Disabled]

4.6.2 Boot Settings Configuration


Phoenix-AwardBIOS CMOS Setup Utility
Boot
Boot Settings Configuration
Select Menu
Case Open Warning [Enabled]
Quick Boot [Enabled]
Bootup Num-Lock [On]
Typematic Rate Setting [Disabled]
x Typematic Rate (Chars/Sec) 6
x Typematic Delay (Msec) 250
OS Select For DRAM > 64MB [Non-OS2]
Full Screen LOGO [Enabled]
Halt On [All Errors]
Item Specific Help
Press [Enter] to enable or disable.
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Case Open Warning [Enabled]

Enables or disables the chassis open status feature. Setting to **[Enabled]** clears the chassis open status. Configuration options: [Disabled] [Enabled]

Quick Boot [Enabled]

Allows you to enable or disable the system quick boot feature. When this item is set to **[Enabled]**, the system skips certain tests while booting.
Configuration options: [Disabled] [Enabled]

Bootup Num-Lock [On]

Allows you to select the power-on state for the NumLock.
Configuration options: [Off] [On]

Typematic Rate Setting [Disabled]

Allows you to set the keystroke rate. Enable this item to configure the Typematic Rate (Chars/Sec) and the Typematic Delay (Msec).
Configuration options: [Disabled] [Enabled]

The following two items **Typematic Rate (Chars/Sec)** and **Typematic Delay (Msec)** become configurable when **Typematic Rate Setting** is enabled.

Typematic Rate (Chars/Sec) [6]

Allows you to select the rate at which a character repeats when you hold a key.
Configuration options: [6] [8] [10] [12] [15] [20] [24] [30]

Typematic Delay (Msec) [250]

Allows you to set the delay before keystrokes begin to repeat.
Configuration options: [250] [500] [750] [1000]

OS Select For DRAM > 64MB [Non-OS2]

Set this item to **[OS2]** only when you are running on an OS/2 operating system with an installed RAM of greater than 64 MB. Configuration options: [Non-OS2] [OS2]

Full Screen LOGO [Enabled]

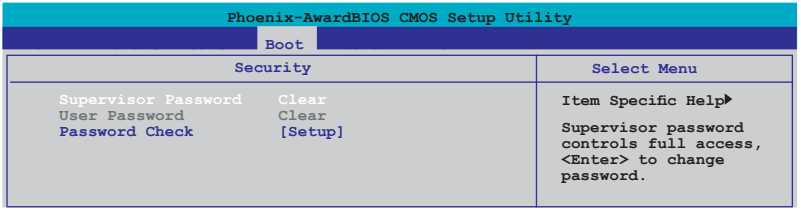
Allows you to enable or disable the full screen logo display feature.
Configuration options: [Disabled] [Enabled]

Set this item to **[Enabled]** if you want to use the ASUS MyLogo2™ feature.

Halt On [All Errors]

Allows you to set the error report type.
Configuration options: [All Errors] [No Errors]

4.6.3 Security



Supervisor Password

User Password

These fields allow you to set passwords:

To set a password:

1. Select an item then press **<Enter>**.
2. From the password box, key in a password which consists of up to eight alphanumeric characters, then press **<Enter>**.
3. Confirm your password when prompted, then press **<Enter>**. The password field shows **Set**.

To clear the password:

1. Select the password field and press **<Enter>** twice. The following message appears:

2. Press any key to continue. The password field shows **Clear**.

A note about passwords

The Supervisor Password is required to enter the BIOS Setup program preventing unauthorized access. The User Password is required to boot the system preventing unauthorized use.

Forgot your password?

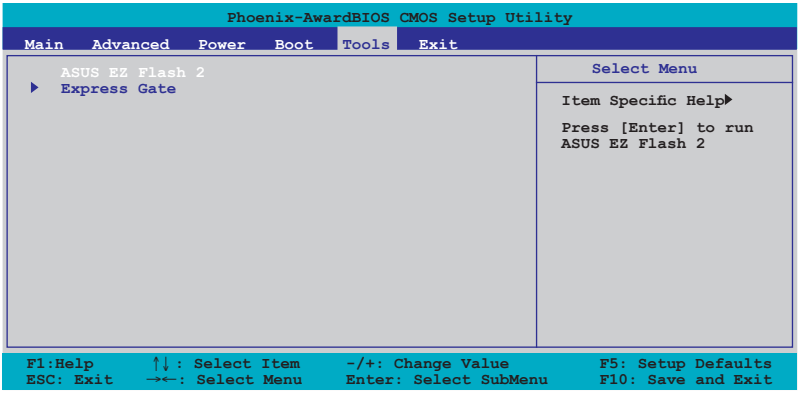
If you forget your password, you can clear it by erasing the CMOS Real Time Clock (RTC) RAM. The RAM data containing the password information is powered by the onboard button cell battery. If you need to erase the CMOS RAM, refer to section **3.3 Jumper** for instructions.

Password Check

Selects whether the password is required every time the system boots or only when you enter the BIOS Setup program. Select **[Setup]** to require the password before entering the BIOS Setup program. Select **[System]** to require the password before entering the system. Configuration options: [Setup] [System]

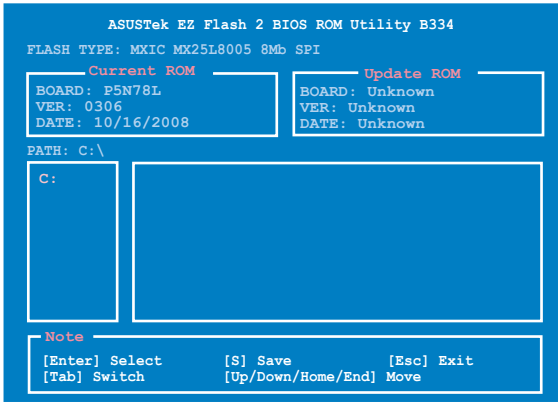
4.7 Tools menu

The Tools menu items allow you to configure options for special functions. Select an item then press **<Enter>** to display the submenu.

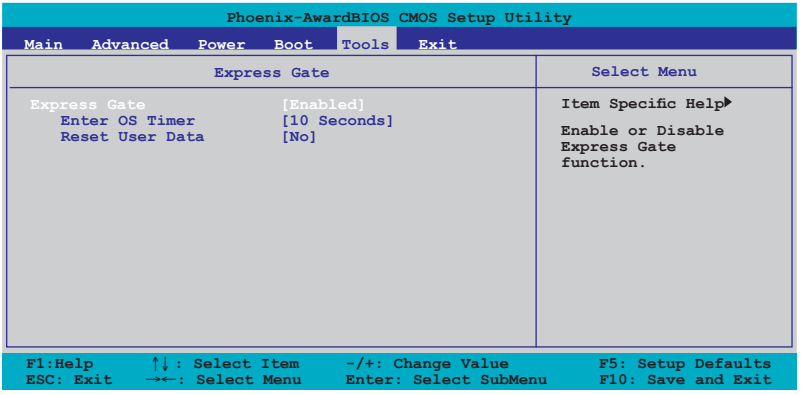


4.7.1 ASUS EZ Flash 2

Allows you to run ASUS EZ Flash 2. When you press **<Enter>**, a confirmation message appears. Use the left/right arrow key to select between **[Yes]** or **[No]**, then press **<Enter>** to confirm your choice.



4.7.2 Express Gate


Phoenix-AwardBIOS CMOS Setup Utility
Main Advanced Power Boot Tools Exit
Express Gate
Select Menu
Express Gate [Enabled]
Enter OS Timer [10 Seconds]
Reset User Data [No]
Item Specific Help
Enable or Disable Express Gate function.
F1:Help ↑↓: Select Item -/+: Change Value F5: Setup Defaults
ESC: Exit →←: Select Menu Enter: Select SubMenu F10: Save and Exit

Express Gate [Enabled]

Allows you to enable or disable the ASUS Express Gate feature. The ASUS Express Gate feature is a unique instant-on environment that provides quick access to the Internet and Skype. Configuration options: [Enabled] [Disabled]

Enter OS Timer [10 Seconds]

Sets countdown duration that the system waits at the Express Gate's first screen before starting Windows or other installed OS. Select **[Prompt User]** to stay at the first screen of Express Gate for user action.
Configuration options: [Prompt User] [1 second] [3 seconds] [5 seconds] [10 seconds] [15 seconds] [20 seconds] [30 seconds]

Reset User Data [No]

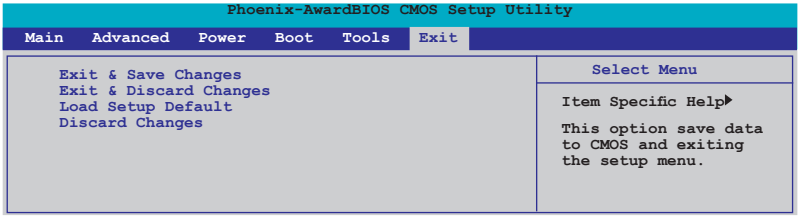
Allows you to clear Express Gate's user data.
Configuration options: [No] [Reset]

When setting this item to **[Reset]**, ensure to save the setting to the BIOS so that the user data will be cleared the next time you enter the Express Gate. User data includes the Express Gate's settings as well as any personal information stored by the web browser (bookmarks, cookies, browsing history, etc.). This is useful in the rare case where corrupt settings prevent the Express Gate environment from launching properly.

The first time wizard will run again when you enter the Express Gate environment after clearing its settings.

4.8 Exit menu

The Exit menu items allow you to load the optimal or failsafe default values for the BIOS items, and save or discard your changes to the BIOS items.



Pressing **<Esc>** does not allow you to immediately exit this menu. Select one of the options from this menu or **<F10>** from the legend bar to exit.

Exit & Save Changes

Once you are finished making your selections, choose this option from the Exit menu to ensure that the values you selected are saved to the CMOS RAM. An onboard backup battery sustains the CMOS RAM so it stays on even when the PC is turned off. When you select this option, a confirmation window appears. Select **[YES]** to save changes and exit.

Exit & Discard Changes

Select this option only if you do not want to save the changes that you made to the Setup program. If you made changes to fields other than System Date, System Time, and Password, the BIOS asks for a confirmation before exiting.

Load Setup Default

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press **<F5>**, a confirmation window appears. Select **[YES]** to load the default values. Select **Exit & Save Changes** or make other changes before saving the values to the non-volatile RAM.

Discard Changes

This option allows you to discard the changes you made and restore the previously saved values. After selecting this option, a confirmation appears. Select **[YES]** to discard any changes and load the previously saved values.

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